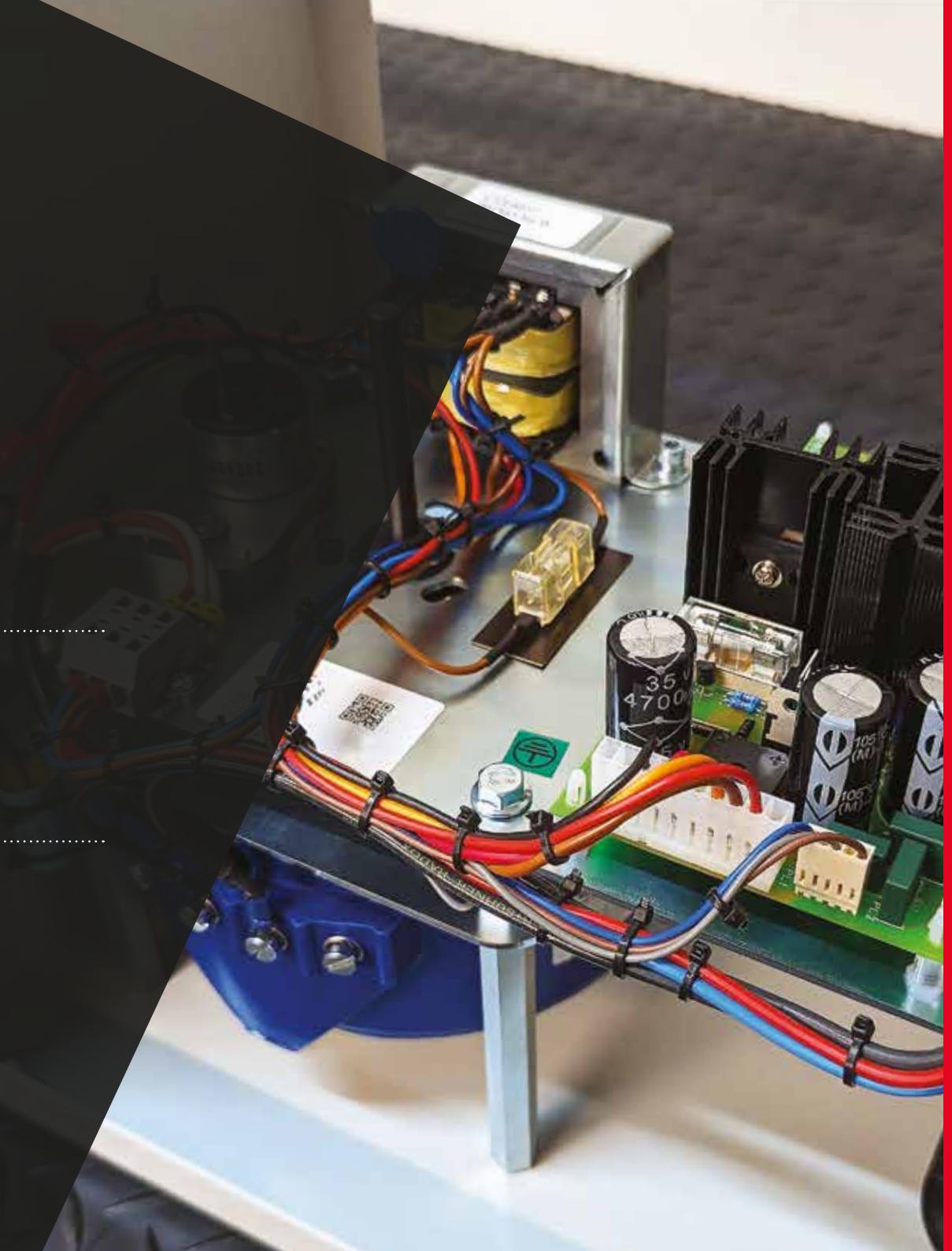




CLAUDE LYONS®

TS Series

# Electromechanical Voltage Stabilisers







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# Claude Lyons: A Trusted Name in Voltage Control

Welcome to Claude Lyons, where innovation meets reliability. With a legacy spanning over a century, we take immense pride in our role as pioneers in the field of voltage control. As you explore our brochure, you'll learn about our rich history, unwavering commitment, and cutting-edge solutions.

Since our foundation in 1918, Claude Lyons has been at the forefront of supplying high-quality voltage control products. Our journey has been marked by many milestones over the years, driven by a relentless pursuit of excellence.

At Claude Lyons, research and development (R&D) is in our DNA. We've forged strong partnerships with universities and government research departments, allowing us to create effective solutions that address the evolving needs of our customers. Our commitment to innovation drives us forward, ensuring our products remain at the cutting edge.

Central to our legacy is the TS brand of electromechanical voltage stabilisers. Born in the 1950s, these stabilisers embody decades of research, experience, and precision engineering. Manufactured right here in the UK, the TS range has become synonymous with reliability and accuracy. It's an iconic British-made product that continues to compete in the global market.

Our philosophy remains steadfast: engineering-based solutions that stand the test of time. When you choose Claude Lyons, you're investing in products designed for longevity, quality, and peace of mind.

Thank you for considering Claude Lyons as your partner, we look forward to working with you.

Regards,



**Alan Ward**

Chief Executive Officer  
Claude Lyons Ltd  
[alan@claudelyons.com](mailto:alan@claudelyons.com)





→ [claude.lyons.com](http://claude.lyons.com)

**Going from strength  
to strength since...**

# 1918



• **1918**

**Claude Lyons sets  
up in business**

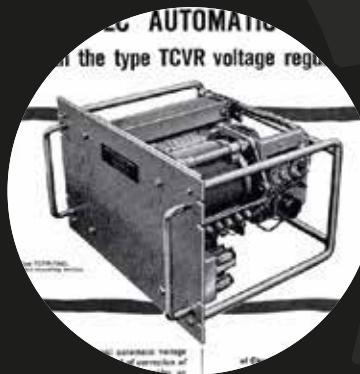
After leaving the British Army, Claude Lyons establishes the company with capital from his disability pension.



• **1933**

**Introduction of the  
Variac® variable  
transformer**

Units are imported from the USA until production commences at the company's new UK manufacturing facility.



• **1939**

**Claude Lyons enters  
the field of mains  
voltage stabilisation**

Early pioneers in voltage control products, the company soon becomes world-renowned for high-quality, reliable systems.

• **1955**

**Introduction of  
servomechanical  
voltage stabilisers**

Production of the robust and proven TS series of voltage stabilisers continues in Hoddesdon, Hertfordshire.





## • 2014

### **Development of the SVR series of solid-state stabilisers**

Advances in silicon technology and subsequent reductions in cost pave the way for the development of solid-state stabilisers.



## • 2016

### **Claude Lyons becomes part of the Allendale Group**

A long-term supplier to the company, the opportunity arises for the Allendale Group to acquire the brand and product ranges.



## • 2017

### **TS Stabilisers resumes UK production**

The product sees a design overhaul in order to meet the latest standard BS EN61558-2-26.



## • 2023

### **Allendale continues to invest**

With investment in an additional 11,000 square feet of manufacturing and storage space, the company has ambitious plans to continue the innovation and development of new products.



## Applications

### → Delivering innovative solutions across multiple markets

In most industries, maintaining a consistent supply voltage is crucial. Too low, and you risk malfunctions; too high, and serious damage can occur. But the challenges extend beyond mere voltage levels.

In today's world, users of high-tech electronics and sensitive devices demand more than just stable voltage. They require a supply that is not only consistent but also free from transient spikes and electrical noise. This need reaches beyond developing countries; even in developed economies, power demand can outstrip supply capacity. As a consequence, significant voltage fluctuations, surges, and brownouts occur within the national grid.

To mitigate these challenges, consider employing Claude Lyons voltage stabilisers. These devices play a crucial role in maintaining a steady voltage, safeguarding critical communication networks and safety-sensitive control applications. Whether preventing downtime or protecting sensitive equipment, voltage stabilisers are indispensable allies in our electrified world.



### Typical applications include:

#### → Medical



Maintaining the correct supply voltage to medical equipment is crucial to meet equipment operating requirements. Claude Lyons TS voltage stabilisers provide stable voltage to X-ray, CT and MRI installations, as well as in mobile applications where power feed quality to the van or trailer is questionable.

#### → Manufacturing



In manufacturing, control of all parameters is key to ensuring efficient and consistent output. Every variable needs to be controlled and maintained, whether it's the temperature in the building or process, the pressure of compressed air systems, or the voltage supply to equipment.

#### → Offshore Rigs



The deployment of offshore rigs in some of the most inhospitable environments will naturally create demanding power requirements. Claude Lyons developed model variants to meet these challenging needs; these units are used in numerous locations worldwide to enable surveying, drilling and production to be undertaken without the power supply problems restricting operations.



## → UPS / Generators



In today's technology-reliant world, uninterrupted power supply is a fundamental requirement. By backing up systems with TS voltage stabilisers, you can increase system resilience and avoid UPS operation failure where supply voltage variation has induced overload or prevented effective battery charging.

## → Railways



Railways have always proved a challenging environment, creating numerous power-related issues. These can be corrected by installing Claude Lyons TS voltage stabilisers, suitable for both indoor and trackside locations.

## → Testing and calibration



Having complete control over the temperature and humidity in testing and calibration laboratories is crucial. Just as important is the need to provide a stable, controlled mains supply voltage, both to the equipment under test and to the testing instrumentation. Claude Lyons TS voltage stabilisers are the ideal solution.

## → Distribution Network Operators



Most DNOs face major challenges concerning changing power requirements and demands. Claude Lyons voltage stabilisers can help resolve issues like network imbalance and voltage variation, assisting in returning and maintaining supplies within statutory limits.

## → Communication / Broadcasting



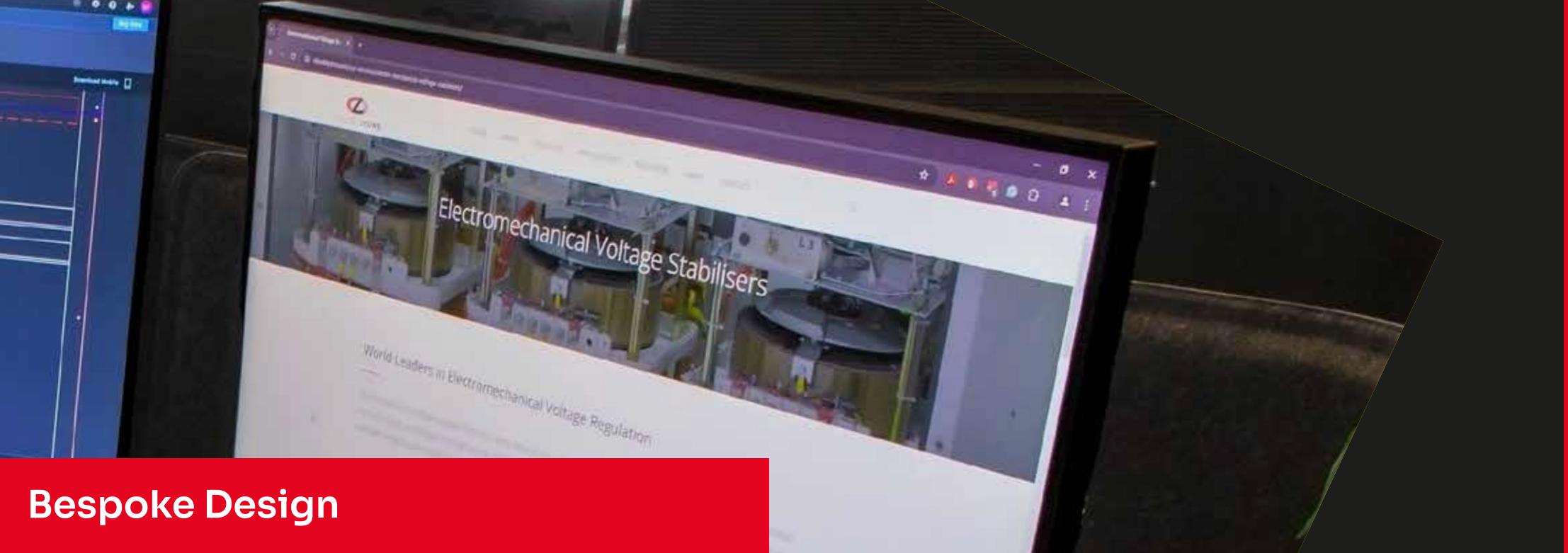
It is crucial to maintain appropriate incoming supply voltage for broadcast and communication equipment to prevent malfunctions and increase the Mean Time Between Failures (MTBF). With the growing complexity of electronics in this industry, protecting equipment in this way has become essential.

## → Energy Management



The Claude Lyons PowerSave range offers cost-effective, innovative technology, helping companies reduce their energy bills by up to 25%. They work by reducing and regulating the mains voltage to the optimised level required by electrical equipment, which is often considerably lower than the standard supply value.





## Bespoke Design

At Claude Lyons, we understand that a one-size-fits-all approach is not always suitable. That's why our TS Series of electromechanical voltage stabilisers goes beyond the standard range. While our existing models offer exceptional performance, we recognise that some applications demand a more personalised touch. Whether you're dealing with specialised requirements or unique constraints, we're here to help.

Tailored Design Excellence: our in-house design and manufacturing facilities allow us to create bespoke solutions that precisely match your needs. From the moment you reach out to us, we're committed to delivering the highest standards of quality. Our team of experts meticulously designs systems that meet your exact specifications. We take pride in our attention to detail, ensuring optimal performance and reliability.

Cost-Effective Solutions: custom doesn't have to mean expensive. We leverage our expertise to provide economical solutions without compromising on quality.

Diverse Industry Experience: with decades of experience in voltage control, Claude Lyons has partnered with clients across various industries.

Here are just a few examples of the special features we've incorporated for our clients:

- High ambient temperatures
- Low ambient temperatures
- High altitude
- Safe start
- Remote sensing
- Bypass switch
- True RMS sensing
- LCD interactive display
- Isolated output
- Noise, spike and transient protection
- Over and undervoltage relay
- Isolation transformer

# What is a Voltage Stabiliser?

A voltage stabiliser, also known as a voltage regulator, is a device that is designed to stabilise the incoming mains supply voltage before feeding it to the connected equipment. The stabiliser monitors the input voltage level and compares it to a pre-set value. If the incoming voltage level deviates from the pre-set value by more than the stabiliser's output tolerance, it will adjust the voltage supply to ensure that it remains stable.

The voltage stabiliser adjusts the incoming supply voltage to ensure that the output voltage is within the tolerance range of the pre-set value. If the incoming voltage is higher than the pre-set value, it reduces the voltage. Conversely, if the incoming voltage is lower, it increases the voltage.

## → Why are voltage stabilisers needed?

Some equipment can be permanently damaged by operating outside of its designed supply range. Some other types of equipment require a controlled supply voltage to ensure accuracy, consistency or repeatability of operation.

Voltage stabilisers serve as a protective barrier between your equipment and the mains supply. They continuously monitor and stabilise voltage fluctuations that occur in the incoming mains supply. This ensures that your valuable appliances receive a consistent and stabilised voltage input that is in line with the applicable equipment design voltage. As a result, your appliances will operate trouble-free, reliably, and enjoy a long operational life.

## → How do Claude Lyons voltage stabilisers adjust the voltage?

Claude Lyons TS and MS/MSB voltage stabilisers work by adjusting the voltage through the application of an in-phase or out-of-phase voltage of variable magnitude on the primary winding of a buck-and-boost transformer. This adjustment helps control the voltage in the secondary winding, which is connected in series between the supply and the load.

As this operating system only supplies the buck-and-boost transformer with the corrective voltage necessary to restore the output within tolerance, the variable power is only a fraction of the total system power.

The current supplied by the voltage stabiliser is totally dependent upon the load applied. Provided the voltage stabiliser is operated within its specified limits, the output voltage delivered to the load will be maintained within the voltage stabiliser's tolerance of the pre-set output voltage level. The voltage stabiliser automatically controls adjustments to the output voltage to counter voltage variations due to supply or load variations.

Three phase assemblies comprise three single phase units, connected together in a single cabinet or cubicle. These provide individual correction of each phase, ensuring balance even with an unbalanced supply or load.

Claude Lyons TS voltage stabilisers are designed to provide the highest level of precision and stability. These units offer superior versatility in a single package with alternative range tappings as standard and three selectable input swing ranges. The standard output tolerances of  $\pm 0.32\%$ ,  $\pm 0.55\%$ ,  $\pm 0.9\%$ , and  $\pm 1.6\%$  ensure that you get the exceptional output precision and stability that your applications demand.



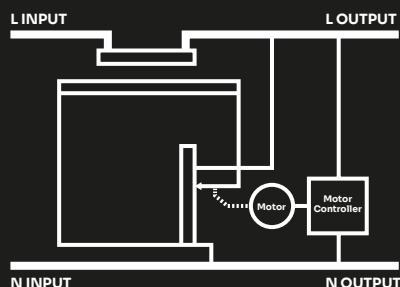
# Stabiliser Technologies

Claude Lyons' wealth of experience and rich history of developing and enhancing its products have resulted in the integration of two prime technologies in its current range of voltage stabilisers, providing superior performance and reliability.

## → Claude Lyons TS Servomechanical Voltage Stabilisers

The Claude Lyons TS series servomechanical voltage stabilisers were until recently based on the most widely utilised technologies for voltage stabilisers. Claude Lyons introduced the servomechanical voltage stabiliser in the 1950s, a natural progression from the range of CVT transformers it superseded, and a valuable production addition and companion to its variable transformer production.

Based on a variable transformer which has a fixed tap as well as a moving brush which feeds the primary of a buck-boost transformer, the buck-boost transformer has a single low voltage high current secondary winding and one (or more, depending on the model) primary winding. The secondary winding is connected in series between the mains and the load. The primary winding is connected to the variable output of the auto-transformer, which is motor-driven and controlled by a motor controller.



### Advantages

Rugged design - fast response - close tolerance outputs available.

### Disadvantages

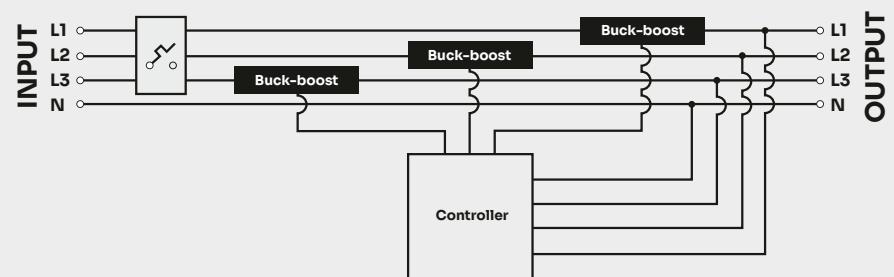
Moving parts - requires servicing.

### Applications

Very popular and understood technology – used worldwide and a well-respected and trusted brand.  
Universally applied – regularly specified where system or process requires precision stabilisation.

## → Claude Lyons SVR Series Electronic Voltage Stabilisers

The SVR series of solid-state voltage stabilisers has been designed using the latest microprocessor control technology. It features fast true RMS sensing, along with a fast AC thyristor, ensuring stable and efficient voltage stabilisation. The tried and tested buck-boost transformer technology provides stable, efficient rugged voltage stabilisation without added waveform distortion.



### Advantages

Rugged design - ultra-wide input swing ranges available - ultra-fast response - no moving parts - maintenance-free.

### Disadvantages

The Claude Lyons SVR series has wider output tolerances of  $\pm 1.3\%$  compared to the TS Series'  $\pm 0.5\%$ .

### Applications

Universally applied – Claude Lyons SVR stabilisers have been installed in numerous complex environments where their maintenance-free design is a huge benefit.

# TS vs SVR Series

Features	TS	SVR
Microprocessor-controlled	✓	✓
Moving Parts	✓	✗
Service / Maintenance Required <sup>1</sup>	✓	✗
Safe Start <sup>2</sup>	Optional	✓
LCD User Interface	Optional	✓
Standard Input Swing Ranges up to	±25%	±45.5%
Standard Output Tolerances to <sup>3</sup>	±0.32%	±1.3%
Independent Phase Sense / Control	✓	✓
Undervoltage Detection (programmable)	Optional	✓
Input MCCB	Optional	✓
Output Contactor	Optional	✓
Oversupply Detection (programmable)	Optional	✓
Phase Loss Detection	Optional	✓
Internal No-break Bypass	✗	✓
Internal Alarm Sounder	Optional	✓
Volt-free Alarm Contacts	Optional	✓
Overcurrent Detection (programmable)	Optional	✓
Voltage Adjustment via User Interface	Optional	✓
System Event Log	Optional	✓
System Status Displayed	Optional	✓
True RMS Sensing	✓	✓
Phase Balancing	✓	✓
IPOO – Open Frame	Optional	Optional
Rack Mount	Optional	Optional
IP65 – External Enclosure	Optional	Optional
External Interface Options	✗	✓
Isolation Transformer	Optional	Optional

Notes: 1 Where no servicing/maintenance is stated, routine inspection is recommended to ensure good housekeeping. 2 Safe Start ensures the output starts from a low output level or stabilises before enabling Output On. 3 Higher precision output tolerances available with bespoke systems.



# Choose Your Model



Need help selecting? Our engineers are here to help.

## 1 Power Supply

Select the number of phases required:

- Single phase
- Three phase

## 2 Output Voltage

Select the output voltage required:

Single Phase: 100 to 127V  
200 to 254V

Three Phase: 173 to 220V  
346 to 450V

Need another output voltage?  
Please contact us.

## 3 Power (Unit Rating)

Provide the load current required,  
either in amps (maximum RMS  
current) or kVA rating:

Single phase: 9 to 221A  
0.99 to 48.6 kVA

Three phase: 9 to 221A  
2.97 to 146kVA

Need larger than 146 kVA?  
Please contact us.

→ Do you require an  
electronic voltage  
stabiliser?  
See our SVR series



## 4 Range Selection

Select the most suitable range model:

Swing Range Model	Input Voltage Range			Output Voltage Tolerances (user selectable)
	Tap A	Tap B	Tap C	
R12.5	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	
R17.5	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	
R20	-14% to +6%	±10%	-6% to +14%	
R22.5	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	
R25	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	±0.32%, 0.55%, 0.9%, 1.6%
R30	-21% to +9%	±15%	-9% to +21%	
R35	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	
R40	-28% to +12%	±20%	-12% to +28%	
R45	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	
R50	-35% to +15%	±25%	-15% to +35%	

Table percentages are based on the output voltage (set point). Higher precision output tolerances available.  
Input voltage range taps set to Tap B by default - User adjustable to Tap A or Tap C as required.

## 5 Special Requirements

Our in-house design team can  
tailor our systems to your specific  
requirements and environment:

- IP rating – IP00-IP65
- Isolated output
- Ambient conditions
- Altitude compensation
- Remote monitoring
- Remote sensing

For more information and  
advice, please get in touch:

[sales@claudeleyons.com](mailto:sales@claudeleyons.com)  
+44 (0)1992 455930



# Single Phase

## → TS Series

### Electromechanical Voltage Stabilisers

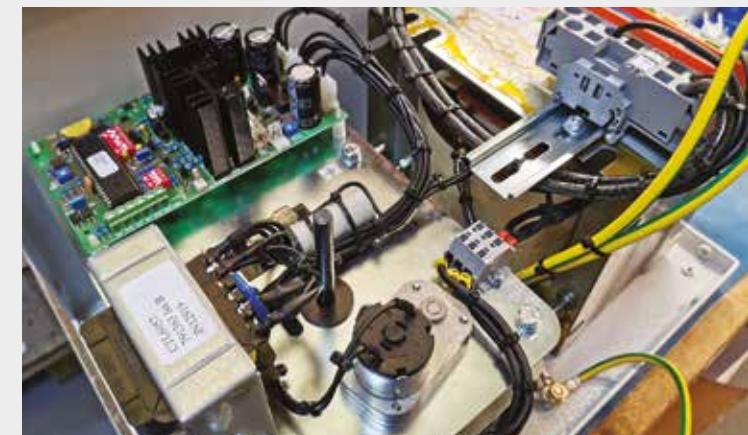
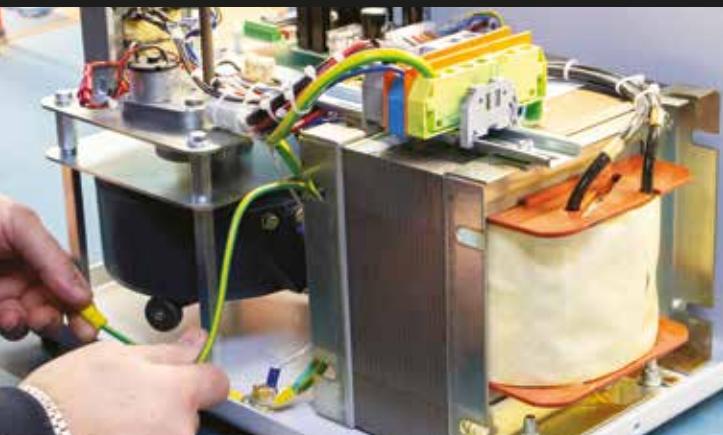
#### Micropocessor Control

Introducing the TS series of electromechanical, solid-state voltage stabilisers – reliable and rugged units using a sophisticated microprocessor control system to continuously monitor and adjust and maintain voltage levels. The tried and tested TS design delivers highly cost-effective, stepless voltage stabilisation without added waveform distortion.

With a huge standard range of single phase models and numerous customisation possibilities, we can supply the perfect solution for you.

## Features

- Ultra-fast voltage stabilisation
- Fine output tolerances – user selectable ±0.32% to ±1.6%.
- Great versatility and reliability
- High efficiency – approx. 98% at full load
- No added waveform distortion
- Unaffected by supply frequency variation
- Wide range of standard models available
- Non-standard models available on request
- In-house design and manufacture to meet customer specification



# Standard Range Typical Specifications

## Input Voltage

Nominal Voltages*	Standard model voltage options: 220, 230, 240V Low voltage model voltage options: 110, 115, 120V
Ranges	+/-3.75% to +/-35%
Frequency*	47-65Hz

## Enclosure\*

IP Rating	IP20*
Mounting	Floorstanding*
Material	Sheet Mild Steel Construction*
Finish	Standard Commercial Powder Coat*

## Output Voltage

Nominal Voltages*	Standard model voltage options: 220, 230, 240V Low voltage model voltage options: 110, 115, 120V
Tolerance*	$\pm 0.55\%$ default (options $\pm 0.32\%$ , $\pm 0.55\%$ , $\pm 0.9\%$ , $\pm 1.6\%$ )
Adjustment*	Standard voltage options: 200-254V Low voltage options: 100-127V

## Packing

Commercial	Standard
Export Crate	Optional

## System

Response Time	Range / voltage / model dependant
Waveform Distortion	Negligible
Efficiency	Typically $\geq 98\%$
Overload Capacity	5 times for 1 second, 3 times for 2 minutes

## Optional Extras

Bypass Switch	Overvoltage Relay
Internal Alarm Sounder	Undervoltage Relay
IP00 Open Frame	Overcurrent Detection
IP65 - External Enclosure	Phase Loss Detection
LCD User Interface	Rack Mount
Lightning Protection	Remote Sensing
Metering - Analogue or Digital	Safe Start
Noise, Spike and Transient Protection	System Event Log
Output Contactor	System Status Displayed
Isolation Transformer	Volt-free Alarm Contacts

## Environmental

Operational Temperature	-5°C to +45°C
Maximum Mean Temperature	+35°C over 24 hours
Humidity	95% Non-Condensing
Cooling	Natural Air Cooled
Altitude	Above 1000m derate by 2.5% / 500m

\*Other values, ranges and options available upon request.



# Single Phase 110V TS Voltage Stabilisers

	R12.5			R20			R25			R30			R40			R50		
Output Set Point (V)	110			110			110			110			110			110		
Output Set Point Range (V)	100-127			100-127			100-127			100-127			100-127			100-127		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-14% to +6%	±10%	-6% to +14%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%	-28% to +12%	±20%	-12% to +28%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	100 to 114	103 to 117	106 to 120	95 to 117	99 to 121	103 to 125	91 to 118	96 to 124	102 to 129	87 to 120	94 to 127	100 to 133	79 to 123	88 to 132	97 to 141	72 to 127	83 to 138	94 to 149
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)		

	R12.5			R20			R25			R30			R40			R50			
TS2L	kVA Rating	5.6	5.7	5.8	3.3	3.4	3.6	2.5	2.6	2.8	2	2.1	2.3	1.4	1.5	1.7	1	1.1	1.3
	Model	CL-TS2L-1-R12.5-110-(A/B/C)			CL-TS2L-1-R20-110-(A/B/C)			CL-TS2L-1-R25-110-(A/B/C)			CL-TS2L-1-R30-110-(A/B/C)			CL-TS2L-1-R40-110-(A/B/C)			CL-TS2L-1-R50-110-(A/B/C)		
	Max Input Current (V in Low)	57			35			28			24			18			14		
	Max Output Current (A)	51	52	53	30	31	32.5	23	24	25.4	18.3	19.5	21	12.5	14	15.1	9	10.3	11.7
	Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230		
	Weight (kg)	26			26			26			26			26			26		
	Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430		
	Packed Weight	59			59			59			59			59			59		

	R12.5			R20			R25			R30			R40			R50			
TS3L	kVA Rating	13.9	14.3	14.6	8.1	8.6	8.9	6.3	6.6	7	5.1	5.4	5.8	3.4	3.9	4.2	2.5	2.9	3.3
	Model	CL-TS3L-1-R12.5-110-(A/B/C)			CL-TS3L-1-R20-110-(A/B/C)			CL-TS3L-1-R25-110-(A/B/C)			CL-TS3L-1-R30-110-(A/B/C)			CL-TS3L-1-R40-110-(A/B/C)			CL-TS3L-1-R50-110-(A/B/C)		
	Max Input Current (V in Low)	141			87			70			59			44			35		
	Max Output Current (A)	126	130	133	74	78	81	57	60	64	46	49	53	31	35	38	22.5	26	30
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	51			51			51			51			51			51		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	131			131			131			131			131			131		

	R12.5			R20			R25			R30			R40			R50			
TS5L	kVA Rating	46.1	47.3	48.5	27.1	28.4	29.7	20.8	22	23.3	16.6	17.9	19.3	11.4	12.7	13.9	8.3	9.5	10.8
	Model	CL-TS5L-1-R12.5-110-(A/B/C)			CL-TS5L-1-R20-110-(A/B/C)			CL-TS5L-1-R25-110-(A/B/C)			CL-TS5L-1-R30-110-(A/B/C)			CL-TS5L-1-R40-110-(A/B/C)			CL-TS5L-1-R50-110-(A/B/C)		
	Max Input Current (V in Low)	470			291			233			195			148			117		
	Max Output Current (A)	419	430	441	246	258	270	189	200	212	151	163	175	104	115	126	75	86	98
	Unit Size W x D x H mm	610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430		
	Weight (kg)	90			90			90			90			90			90		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	205			205			205			205			205			205		



# Single Phase 115V TS Voltage Stabilisers

	R12.5			R20			R25			R30			R40			R50		
Output Set Point (V)	115			115			115			115			115			115		
Output Set Point Range (V)	100-127			100-127			100-127			100-127			100-127			100-127		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-14% to +6%	±10%	-6% to +14%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%	-28% to +12%	±20%	-12% to +28%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	105 to 119	108 to 122	111 to 125	99 to 122	104 to 127	108 to 131	95 to 124	101 to 129	106 to 135	91 to 125	98 to 132	105 to 139	83 to 129	92 to 138	101 to 147	75 to 132	86 to 144	98 to 155
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)		

	R12.5			R20			R25			R30			R40			R50			
TS2L	kVA Rating	5.9	6	6.1	3.5	3.6	3.7	2.6	2.8	2.9	2.1	2.2	2.4	1.4	1.6	1.7	1	1.2	1.3
	Model	CL-TS2L-1-R12.5-115-(A/B/C)			CL-TS2L-1-R20-115-(A/B/C)			CL-TS2L-1-R25-115-(A/B/C)			CL-TS2L-1-R30-115-(A/B/C)			CL-TS2L-1-R40-115-(A/B/C)			CL-TS2L-1-R50-115-(A/B/C)		
	Max Input Current (V in Low)	57			36			28			24			18			14		
	Max Output Current (A)	51	52	53	30	31	32.5	23	24	25.4	18.3	19.5	21	12.5	14	15.1	9	10.3	11.7
	Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230		
	Weight (kg)	26			26			26			26			26			26		
	Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430		
	Packed Weight	59			59			59			59			59			59		

	R12.5			R20			R25			R30			R40			R50			
TS3L	kVA Rating	14.5	15	15.3	8.5	9	9.3	6.6	6.9	7.4	5.3	5.6	6.1	3.6	4	4.4	2.6	3	3.5
	Model	CL-TS3L-1-R12.5-115-(A/B/C)			CL-TS3L-1-R20-115-(A/B/C)			CL-TS3L-1-R25-115-(A/B/C)			CL-TS3L-1-R30-115-(A/B/C)			CL-TS3L-1-R40-115-(A/B/C)			CL-TS3L-1-R50-115-(A/B/C)		
	Max Input Current (V in Low)	141			88			70			59			44			35		
	Max Output Current (A)	126	130	133	74	78	81	57	60	64	46	49	53	31	35	38	22.5	26	30
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	51			51			51			51			51			51		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	131			131			131			131			131			131		

	R12.5			R20			R25			R30			R40			R50			
TS5L	kVA Rating	48.2	49.5	50.7	28.3	29.7	31.1	21.7	23	24.4	17.4	18.7	20.1	12	13.2	14.5	8.6	9.9	11.3
	Model	CL-TS5L-1-R12.5-115-(A/B/C)			CL-TS5L-1-R20-115-(A/B/C)			CL-TS5L-1-R25-115-(A/B/C)			CL-TS5L-1-R30-115-(A/B/C)			CL-TS5L-1-R40-115-(A/B/C)			CL-TS5L-1-R50-115-(A/B/C)		
	Max Input Current (V in Low)	468			291			233			195			147			117		
	Max Output Current (A)	419	430	441	246	258	270	189	200	212	151	163	175	104	115	126	75	86	98
	Unit Size W x D x H mm	610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430		
	Weight (kg)	90			90			90			90			90			90		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	205			205			205			205			205			205		



# Single Phase 120V TS Voltage Stabilisers

	R12.5			R20			R25			R30			R40			R50		
Output Set Point (V)	120			120			120			120			120			120		
Output Set Point Range (V)	100-127			100-127			100-127			100-127			100-127			100-127		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-14% to +6%	±10%	-6% to +14%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%	-28% to +12%	±20%	-12% to +28%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	110 to 125	113 to 128	116 to 131	103 to 127	108 to 132	113 to 137	99 to 129	105 to 135	111 to 141	95 to 131	102 to 138	109 to 145	86 to 134	96 to 144	106 to 154	78 to 138	90 to 150	102 to 162
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)		

	R12.5			R20			R25			R30			R40			R50			
TS2L	kVA Rating	6.1	6.2	6.4	3.6	3.7	3.9	2.8	2.9	3	2.2	2.3	2.5	1.5	1.7	1.8	1.1	1.2	1.4
Model	CL-TS2L-1-R12.5-120-(A/B/C)			CL-TS2L-1-R20-120-(A/B/C)			CL-TS2L-1-R25-120-(A/B/C)			CL-TS2L-1-R30-120-(A/B/C)			CL-TS2L-1-R40-120-(A/B/C)			CL-TS2L-1-R50-120-(A/B/C)			
Max Input Current (V in Low)	57			36			28			24			18			14			
Max Output Current (A)	51	52	53	30	31	32.5	23	24	25.4	18.3	19.5	21	12.5	14	15.1	9	10.3	11.7	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R12.5			R20			R25			R30			R40			R50			
TS3L	kVA Rating	15.1	15.6	16	8.9	9.4	9.7	6.8	7.2	7.7	5.5	5.9	6.4	3.7	4.2	4.6	2.7	3.1	3.6
Model	CL-TS3L-1-R12.5-120-(A/B/C)			CL-TS3L-1-R20-120-(A/B/C)			CL-TS3L-1-R25-120-(A/B/C)			CL-TS3L-1-R30-120-(A/B/C)			CL-TS3L-1-R40-120-(A/B/C)			CL-TS3L-1-R50-120-(A/B/C)			
Max Input Current (V in Low)	140			88			70			59			44			35			
Max Output Current (A)	126	130	133	74	78	81	57	60	64	46	49	53	31	35	38	22.5	26	30	
Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			
Weight (kg)	51			51			51			51			51			51			
Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			
Packed Weight	131			131			131			131			131			131			

	R12.5			R20			R25			R30			R40			R50			
TS5L	kVA Rating	50.3	51.6	52.9	29.5	31	32.4	22.7	24	25.4	18.1	19.6	21	12.5	13.8	15.1	9	10.3	11.8
	Model	CL-TS5L-1-R12.5-120-(A/B/C)			CL-TS5L-1-R20-120-(A/B/C)			CL-TS5L-1-R25-120-(A/B/C)			CL-TS5L-1-R30-120-(A/B/C)			CL-TS5L-1-R40-120-(A/B/C)			CL-TS5L-1-R50-120-(A/B/C)		
	Max Input Current (V in Low)	466			292			234			195			148			118		
	Max Output Current (A)	419	430	441	246	258	270	189	200	212	151	163	175	104	115	126	75	86	98
	Unit Size W x D x H mm	610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430			610 x 425x 430		
	Weight (kg)	90			90			90			90			90			90		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	205			205			205			205			205			205		



# Single Phase 220V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V)	220			220			220			220			220			220		
Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V)	201 to 228	206 to 234	212 to 239	193 to 232	201 to 239	208 to 247	189 to 233	198 to 242	207 to 251	185 to 235	195 to 245	205 to 255	182 to 237	193 to 248	204 to 259	174 to 240	187 to 253	200 to 266
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2	kVA Rating	5.5	5.7	5.8	3.7	4	4.2	3.3	3.4	3.6	2.9	3	3.2	2.5	2.6	2.8	2	2.2	2.3
Model	CL-TS2-1-R12.5-220-(A/B/C)			CL-TS2-1-R17.5-220-(A/B/C)			CL-TS2-1-R20-220-(A/B/C)			CL-TS2-1-R22.5-220-(A/B/C)			CL-TS2-1-R25-220-(A/B/C)			CL-TS2-1-R30-220-(A/B/C)			
Max Input Current (V in Low)	28			20			18			16			14			12			
Max Output Current (A)	25	26	26.4	17	18	19	15	15.5	16.5	13	13.6	14.5	11.4	12	12.7	9.2	9.8	10.5	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2.5	kVA Rating	7.5	7.5	7.9	5.1	5.3	5.5	4.4	4.6	4.8	3.9	4	4.2	3.3	3.5	3.7	2.6	2.9	3.1
Model	CL-TS2.5-1-R12.5-220-(A/B/C)			CL-TS2.5-1-R17.5-220-(A/B/C)			CL-TS2.5-1-R20-220-(A/B/C)			CL-TS2.5-1-R22.5-220-(A/B/C)			CL-TS2.5-1-R25-220-(A/B/C)			CL-TS2.5-1-R30-220-(A/B/C)			
Max Input Current (V in Low)	38			27			24			21			18			15			
Max Output Current (A)	34	34	36	23	24	25	20	21	22	17.5	18	19	15	16	17	12	13	14	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R35			R40			R45			R50		
Output Set Point (V)	220			220			220			220		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	166 to 243	182 to 259	197 to 274	158 to 246	176 to 264	194 to 282	151 to 250	171 to 270	190 to 289	143 to 253	165 to 275	187 to 297
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	1.7	1.8	1.9	1.4	1.5	1.7	1.1	1.3	1.5	1	1.1	1.3
Model	CL-TS2-1-R35-220-(A/B/C)			CL-TS2-1-R40-220-(A/B/C)			CL-TS2-1-R45-220-(A/B/C)			CL-TS2-1-R50-220-(A/B/C)		
Max Input Current (V in Low)	10			9			8			7		
Max Output Current (A)	7	8.2	8.8	6.2	6.8	7.5	5.2	6	6.6	4.5	5.2	5.9
Unit Size W x D x H mm	440 x 240 x 230											
Weight (kg)	26			26			26			26		
Packed Size W x D x H mm	560 x 360 x 430											
Packed Weight	59			59			59			59		

	R35			R40			R45			R50		
kVA Rating	2.2	2.4	2.6	1.9	2	2.2	1.5	1.8	2	1.3	1.5	1.8
Model	CL-TS2.5-1-R35-220-(A/B/C)			CL-TS2.5-1-R40-220-(A/B/C)			CL-TS2.5-1-R45-220-(A/B/C)			CL-TS2.5-1-R50-220-(A/B/C)		
Max Input Current (V in Low)	14			12			10			9		
Max Output Current (A)	10	11	12	8.4	9	10	7	8	9	6	7	8
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230		
Weight (kg)	26			26			26			26		
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430		
Packed Weight	59			59			59			59		



# Single Phase 220V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3	Output Set Point (V)	220			220			220			220			220			220		
	Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
	Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
	Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
	Input Correction Range (V)	201 to 228	206 to 234	212 to 239	193 to 232	201 to 239	208 to 247	189 to 233	198 to 242	207 to 251	185 to 235	195 to 245	205 to 255	182 to 237	193 to 248	204 to 259	174 to 240	187 to 253	200 to 266
	Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
	Output Tolerance Range (V)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	18.5	18.9	19.6	12.8	13.2	13.6	11	11.4	11.9	9.5	10.1	10.6	8.4	8.8	9.2	6.6	7	7.7
	Model	CL-TS3-1-R12.5-220-(A/B/C)			CL-TS3-1-R17.5-220-(A/B/C)			CL-TS3-1-R20-220-(A/B/C)			CL-TS3-1-R22.5-220-(A/B/C)			CL-TS3-1-R25-220-(A/B/C)			CL-TS3-1-R30-220-(A/B/C)		
	Max Input Current (V in Low)	94			68			59			52			47			39		
	Max Output Current (A)	84	86	89	58	60	62	50	52	54	43	46	48	38	40	42	30	32	35
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	51			51			51			51			51			51		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	122			122			122			122			122			122		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	27.7	28.4	29.3	19.1	19.8	20.7	16.3	17.2	17.8	14.3	15	15.8	12.5	13.2	13.9	9.9	10.6	11.4
	Model	CL-TS3.5-1-R12.5-220-(A/B/C)			CL-TS3.5-1-R17.5-220-(A/B/C)			CL-TS3.5-1-R20-220-(A/B/C)			CL-TS3.5-1-R22.5-220-(A/B/C)			CL-TS3.5-1-R25-220-(A/B/C)			CL-TS3.5-1-R30-220-(A/B/C)		
	Max Input Current (V in Low)	141			101			88			79			70			58		
	Max Output Current (A)	126	129	133	87	90	94	74	78	81	65	68	72	57	60	63	45	48	52
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	60			60			60			60			60			60		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	131			131			131			131			131			131		

	R35			R40			R45			R50		
Output Set Point (V)	220			220			220			220		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	166 to 243	182 to 259	197 to 274	158 to 246	176 to 264	194 to 282	151 to 250	171 to 270	190 to 289	143 to 253	165 to 275	187 to 297
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R35			R40			R45			R50			
TS3	kVA Rating	5.5	5.9	6.4	4.6	5.1	5.5	3.7	4.4	4.8	3.3	3.7	4.2
Model	CL-TS3-1-R35-220-(A/B/C)			CL-TS3-1-R40-220-(A/B/C)			CL-TS3-1-R45-220-(A/B/C)			CL-TS3-1-R50-220-(A/B/C)			
Max Input Current (V in Low)	34			30			25			24			
Max Output Current (A)	25	27	29	21	23	25	17	20	22	15	17	19	
Unit Size W x D x H mm	485 x 265 x 355												
Weight (kg)	51			51			51			51			
Packed Size W x D x H mm	590 x 380 x 560												
Packed Weight	122			122			122			122			

	R35			R40			R45			R50			
TS3.5	kVA Rating	8.1	9	9.7	6.8	7.5	8.4	5.7	6.6	7.3	4.8	5.7	6.4
Model	CL-TS3.5-1-R35-220-(A/B/C)			CL-TS3.5-1-R40-220-(A/B/C)			CL-TS3.5-1-R45-220-(A/B/C)			CL-TS3.5-1-R50-220-(A/B/C)			
Max Input Current (V in Low)	50			44			39			35			
Max Output Current (A)	37	41	44	31	34	38	26	30	33	22	26	29	
Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			
Weight (kg)	60			60			60			60			
Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			
Packed Weight	131			131			131			131			



# Single Phase 220V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V)	220			220			220			220			220			220		
Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V)	201 to 228	206 to 234	212 to 239	193 to 232	201 to 239	208 to 247	189 to 233	198 to 242	207 to 251	185 to 235	195 to 245	205 to 255	182 to 237	193 to 248	204 to 259	174 to 240	187 to 253	200 to 266
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS4	kVA Rating	37.4	37.8	38.9	25.3	26.4	27.3	21.8	22.9	23.8	18.9	20	20.9	16.5	17.6	18.7	13.2	14.3	15.4
Model	CL-TS4-1-R12.5-220-(A/B/C)			CL-TS4-1-R17.5-220-(A/B/C)			CL-TS4-1-R20-220-(A/B/C)			CL-TS4-1-R22.5-220-(A/B/C)			CL-TS4-1-R25-220-(A/B/C)			CL-TS4-1-R30-220-(A/B/C)			
Max Input Current (V in Low)	190			134			118			104			92			77			
Max Output Current (A)	170	172	177	115	150	156	99	104	108	86	91	95	75	80	85	60	65	70	
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			
Weight (kg)	90			90			90			90			90			90			
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			
Packed Weight	205			205			205			205			205			205			

	R12.5			R17.5			R20			R22.5			R25			R30			
TS5	kVA Rating	46.2	47.3	48.6	31.7	33	34.3	27.3	28.4	29.7	23.8	24.9	26.2	20.9	22	23.3	16.5	17.8	19.1
Model	CL-TS5-1-R12.5-220-(A/B/C)			CL-TS5-1-R17.5-220-(A/B/C)			CL-TS5-1-R20-220-(A/B/C)			CL-TS5-1-R22.5-220-(A/B/C)			CL-TS5-1-R25-220-(A/B/C)			CL-TS5-1-R30-220-(A/B/C)			
Max Input Current (V in Low)	234			168			147			131			117			97			
Max Output Current (A)	210	215	221	144	150	156	124	129	135	108	113	119	95	100	106	75	81	87	
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			
Weight (kg)	97			97			97			97			97			97			
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			
Packed Weight	212			212			212			212			212			212			

	R35			R40			R45			R50		
Output Set Point (V)	220			220			220			220		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	166 to 243	182 to 259	197 to 274	158 to 246	176 to 264	194 to 282	151 to 250	171 to 270	190 to 289	143 to 253	165 to 275	187 to 297
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	11	11.9	13	9	9.9	11	7.7	8.8	9.7	6.6	7.5	8.6
Model	CL-TS4-1-R35-220-(A/B/C)			CL-TS4-1-R40-220-(A/B/C)			CL-TS4-1-R45-220-(A/B/C)			CL-TS4-1-R50-220-(A/B/C)		
Max Input Current (V in Low)	68			58			52			47		
Max Output Current (A)	50	68	73	41	45	50	35	40	44	30	34	39
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430		
Weight (kg)	90			90			90			90		
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
Packed Weight	205			205			205			205		

	R35			R40			R45			R50		
kVA Rating	13.6	14.9	16.1	11.2	12.5	13.9	9.68	11	12.1	8.14	9.46	10.6
Model	CL-TS5-1-R35-220-(A/B/C)			CL-TS5-1-R40-220-(A/B/C)			CL-TS5-1-R45-220-(A/B/C)			CL-TS5-1-R50-220-(A/B/C)		
Max Input Current (V in Low)	84			72			65			58		
Max Output Current (A)	62	68	73	51	57	63	44	50	55	37	43	48
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430		
Weight (kg)	97			97			97			97		
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
Packed Weight	212			212			212			212		



# Single Phase 230V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V)	230			230			230			230			230			230		
Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V)	210 to 239	216 to 244	221 to 250	202 to 242	210 to 250	218 to 258	198 to 244	207 to 253	216 to 262	194 to 246	204 to 266	214 to 266	190 to 247	201 to 270	213 to 270	182 to 251	196 to 265	209 to 278
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2	kVA Rating	5.8	6	6.1	3.9	4.1	4.4	3.5	3.6	3.8	3	3.1	3.3	2.6	2.8	2.9	2.1	2.3	2.4
Model	CL-TS2-1-R12.5-230-(A/B/C)			CL-TS2-1-R17.5-230-(A/B/C)			CL-TS2-1-R20-230-(A/B/C)			CL-TS2-1-R22.5-230-(A/B/C)			CL-TS2-1-R25-230-(A/B/C)			CL-TS2-1-R30-230-(A/B/C)			
Max Input Current (V in Low)	28			20			18			16			14			12			
Max Output Current (A)	25	26	26.4	17	18	19	15	15.5	16.5	13	13.6	14.5	11.4	12	12.7	9.2	9.8	10.5	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2.5	kVA Rating	7.8	7.8	8.3	5.3	5.5	5.8	4.6	4.8	5.1	4	4.1	4.4	3.5	3.7	3.9	2.8	3	3.2
Model	CL-TS2.5-1-R12.5-230-(A/B/C)			CL-TS2.5-1-R17.5-230-(A/B/C)			CL-TS2.5-1-R20-230-(A/B/C)			CL-TS2.5-1-R22.5-230-(A/B/C)			CL-TS2.5-1-R25-230-(A/B/C)			CL-TS2.5-1-R30-230-(A/B/C)			
Max Input Current (V in Low)	38			27			24			21			19			15			
Max Output Current (A)	34	34	36	23	24	25	20	21	22	17.5	18	19	15	16	17	12	13	14	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R35			R40			R45			R50		
Output Set Point (V)	230			230			230			230		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	174 to 254	190 to 270	206 to 286	166 to 258	184 to 276	202 to 294	158 to 261	178 to 282	199 to 302	150 to 265	173 to 288	196 to 311
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	1.6	1.9	2	1.4	1.6	1.7	1.2	1.4	1.5	1	1.2	1.4
Model	CL-TS2-1-R35-230-(A/B/C)			CL-TS2-1-R40-230-(A/B/C)			CL-TS2-1-R45-230-(A/B/C)			CL-TS2-1-R50-220-(A/B/C)		
Max Input Current (V in Low)	10			9			8			7		
Max Output Current (A)	7	8.2	8.8	6.2	6.8	7.5	5.2	6	6.6	4.5	5.2	5.9
Unit Size W x D x H mm	440 x 240 x 230											
Weight (kg)	26			26			26			26		
Packed Size W x D x H mm	560 x 360 x 430											
Packed Weight	59			59			59			59		

	R35			R40			R45			R50		
kVA Rating	2.3	2.5	2.8	1.9	2.1	2.3	1.6	1.8	2.1	1.4	1.6	1.8
Model	CL-TS2.5-1-R35-230-(A/B/C)			CL-TS2.5-1-R40-230-(A/B/C)			CL-TS2.5-1-R45-230-(A/B/C)			CL-TS2.5-1-R50-230-(A/B/C)		
Max Input Current (V in Low)	13			12			10			9		
Max Output Current (A)	10	11	12	8.4	9	10	7	8	9	6	7	8
Unit Size W x D x H mm	440 x 240 x 230											
Weight (kg)	26			26			26			26		
Packed Size W x D x H mm	560 x 360 x 430											
Packed Weight	59			59			59			59		



# Single Phase 230V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3	Output Set Point (V)	230			230			230			230			230			230		
	Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
	Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
	Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
	Input Correction Range (V)	210 to 239	216 to 244	221 to 250	202 to 242	210 to 250	218 to 258	198 to 244	207 to 253	216 to 262	194 to 246	204 to 256	214 to 266	190 to 247	201 to 289	213 to 270	182 to 251	196 to 265	209 to 278
	Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
	Output Tolerance Range (V)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	19.3	19.8	20.5	13.3	13.8	14.3	11.5	12	12.4	9.9	10.6	11	8.7	9.2	9.7	6.9	7.4	8.1
	Model	CL-TS3-1-R12.5-230-(A/B/C)			CL-TS3-1-R17.5-230-(A/B/C)			L-TS3-1-R20-220-(A/B/C)			CL-TS3-1-R22.5-230-(A/B/C)			CL-TS3-1-R25-230-(A/B/C)			CL-TS3-1-R30-230-(A/B/C)		
	Max Input Current (V in Low)	94			67			59			52			47			39		
	Max Output Current (A)	84	86	89	58	60	62	50	52	54	43	46	48	38	40	42	30	32	35
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	51			51			51			51			51			51		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	122			122			122			122			122			122		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	29	29.7	30.6	20	20.7	21.6	17	17.9	18.6	15	15.6	16.6	13.1	13.8	14.5	10.4	11	12
	Model	CL-TS3.5-1-R12.5-230-(A/B/C)			CL-TS3.5-1-R17.5-230-(A/B/C)			CL-TS3.5-1-R20-230-(A/B/C)			CL-TS3.5-1-R22.5-230-(A/B/C)			CL-TS3.5-1-R25-230-(A/B/C)			CL-TS3.5-1-R30-230-(A/B/C)		
	Max Input Current (V in Low)	141			101			88			79			70			58		
	Max Output Current (A)	126	129	133	87	90	94	74	78	81	65	68	72	57	60	63	45	48	52
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	60			60			60			60			60			60		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	131			131			131			131			131			131		

	R35			R40			R45			R50		
Output Set Point (V)	230			230			230			230		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	174 to 254	190 to 270	206 to 286	166 to 258	184 to 276	202 to 294	158 to 261	178 to 282	199 to 302	150 to 265	173 to 288	196 to 311
Output Tolerance Range (%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R35			R40			R45			R50			
TS3	kVA Rating	5.8	6.2	6.7	4.8	5.3	5.8	3.9	4.6	5.1	3.5	3.9	4.4
Model	CL-TS3-1-R35-230-(A/B/C)			CL-TS3-1-R40-230-(A/B/C)			CL-TS3-1-R45-230-(A/B/C)			CL-TS3-1-R50-230-(A/B/C)			
Max Input Current (V in Low)	34			30			25			23			
Max Output Current (A)	25	27	29	21	23	25	17	20	22	15	17	19	
Unit Size W x D x H mm	485 x 265 x 355												
Weight (kg)	51			51			51			51			
Packed Size W x D x H mm	590 x 380 x 560												
Packed Weight	122			122			122			122			

	R35			R40			R45			R50			
TS3.5	kVA Rating	8.5	9.4	10.1	7.1	7.8	8.7	6	6.9	7.6	5.1	6	6.7
Model	CL-TS3.5-1-R35-230-(A/B/C)			CL-TS3.5-1-R40-220-(A/B/C)			CL-TS3.5-1-R45-230-(A/B/C)			CL-TS3.5-1-R50-230-(A/B/C)			
Max Input Current (V in Low)	50			44			39			34			
Max Output Current (A)	37	41	44	31	34	38	26	30	33	22	26	29	
Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			
Weight (kg)	60			60			60			60			
Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			
Packed Weight	131			131			131			131			



# Single Phase 230V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V)	230			230			230			230			230			230		
Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V)	210 to 239	216 to 244	221 to 250	202 to 242	210 to 250	218 to 258	198 to 244	207 to 253	216 to 262	194 to 246	204 to 256	214 to 266	190 to 247	201 to 259	213 to 270	182 to 251	196 to 265	209 to 278
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS4	kVA Rating	39.1	39.6	40.7	26.5	34.5	35.9	22.8	23.9	24.8	19.8	20.9	21.9	17.3	18.4	19.6	13.8	15	16.1
Model	CL-TS4-1-R12.5-230-(A/B/C)			CL-TS4-1-R17.5-230-(A/B/C)			CL-TS4-1-R20-230-(A/B/C)			CL-TS4-1-R22.5-230-(A/B/C)			CL-TS4-1-R25-230-(A/B/C)			CL-TS4-1-R30-230-(A/B/C)			
Max Input Current (V in Low)	190			134			117			104			93			77			
Max Output Current (A)	170	172	177	115	150	156	99	104	108	86	91	95	75	80	85	60	65	70	
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			
Weight (kg)	90			90			90			90			90			90			
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			
Packed Weight	205			205			205			205			205			205			

	R12.5			R17.5			R20			R22.5			R25			R30			
TS5	kVA Rating	48.3	49.5	50.8	33.1	34.5	35.9	28.5	29.7	31.1	24.8	26	27.4	21.9	23	24.4	17.3	18.6	20
Model	CL-TS5-1-R12.5-230-(A/B/C)			CL-TS5-1-R17.5-230-(A/B/C)			CL-TS5-1-R20-230-(A/B/C)			CL-TS5-1-R22.5-230-(A/B/C)			CL-TS5-1-R25-230-(A/B/C)			CL-TS5-1-R30-230-(A/B/C)			
Max Input Current (V in Low)	235			167			147			131			117			97			
Max Output Current (A)	210	215	221	144	150	156	124	129	135	108	113	119	95	100	106	75	81	87	
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			
Weight (kg)	97			97			97			97			97			97			
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			
Packed Weight	212			212			212			212			212			212			

	R35			R40			R45			R50		
Output Set Point (V)	230			230			230			230		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	174 to 254	190 to 270	206 to 286	166 to 258	184 to 276	202 to 294	158 to 261	178 to 282	199 to 302	150 to 265	173 to 288	196 to 311
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R35			R40			R45			R50			
TS4	kVA Rating	11.5	15.6	16.8	9.4	10.4	11.5	8.1	9.2	10.1	6.9	7.8	9
	Model	CL-TS4-1-R35-230-(A/B/C)			CL-TS4-1-R40-220-(A/B/C)			CL-TS4-1-R45-230-(A/B/C)			CL-TS4-1-R50-230-(A/B/C)		
	Max Input Current (V in Low)	67			58			52			47		
	Max Output Current (A)	50	68	73	41	45	50	35	40	44	30	34	39
	Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430		
	Weight (kg)	90			90			90			90		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	205			205			205			205		

	R35			R40			R45			R50			
TS5	kVA Rating	14.3	15.6	16.8	11.7	13.1	14.5	10.1	11.5	12.7	8.5	9.9	11
	Model	CL-TS5-1-R35-230-(A/B/C)			CL-TS5-1-R40-220-(A/B/C)			CL-TS5-1-R45-230-(A/B/C)			L-TS5-1-R50-230-(A/B/C)		
	Max Input Current (V in Low)	84			72			65			58		
	Max Output Current (A)	62	68	73	51	57	63	44	50	55	37	43	48
	Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430		
	Weight (kg)	97			97			97			97		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	212			212			212			212		



# Single Phase 240V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V)	240			240			240			240			240			240		
Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V)	219 to 249	225 to 255	231 to 261	211 to 253	219 to 261	227 to 269	206 to 254	216 to 264	226 to 274	202 to 256	213 to 267	224 to 278	198 to 258	210 to 270	222 to 282	190 to 262	204 to 276	218 to 290
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2	kVA Rating	6	6.2	6.3	4.1	4.3	4.6	3.6	3.7	4	3.1	3.3	3.5	2.7	2.9	3	2.2	2.4	2.5
Model	CL-TS2-1-R12.5-240-(A/B/C)			CL-TS2-1-R17.5-240-(A/B/C)			CL-TS2-1-R20-240-(A/B/C)			CL-TS2-1-R22.5-240-(A/B/C)			CL-TS2-1-R25-240-(A/B/C)			CL-TS2-1-R30-240-(A/B/C)			
Max Input Current (V in Low)	28			20			18			16			14			12			
Max Output Current (A)	25	26	26.4	17	18	19	15	15.5	16.5	13	13.6	14.5	11.4	12	12.7	9.2	9.8	10.5	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2.5	kVA Rating	8.2	8.2	8.6	5.5	5.8	6	4.8	5	5.3	4.2	4.3	4.6	3.6	3.8	4.1	2.9	3.1	3.4
Model	CL-TS2.5-1-R12.5-240-(A/B/C)			CL-TS2.5-1-R17.5-240-(A/B/C)			CL-TS2.5-1-R20-240-(A/B/C)			CL-TS2.5-1-R22.5-240-(A/B/C)			CL-TS2.5-1-R25-240-(A/B/C)			CL-TS2.5-1-R30-240-(A/B/C)			
Max Input Current (V in Low)	38			27			24			21			19			15			
Max Output Current (A)	34	34	36	23	24	25	20	21	22	17.5	18	19	15	16	17	12	13	14	
Unit Size W x D x H mm	440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			440 x 240 x 230			
Weight (kg)	26			26			26			26			26			26			
Packed Size W x D x H mm	560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			560 x 360 x 430			
Packed Weight	59			59			59			59			59			59			

	R35			R40			R45			R50		
Output Set Point (V)	240			240			240			240		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	181 to 265	198 to 282	215 to 299	173 to 269	192 to 288	211 to 307	164 to 272	186 to 294	208 to 316	156 to 276	180 to 300	204 to 324
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	1.7	2	2.1	1.5	1.6	1.8	1.2	1.4	1.6	1.1	1.2	1.4
Model	CL-TS2-1-R35-240-(A/B/C)			CL-TS2-1-R40-240-(A/B/C)			CL-TS2-1-R45-240-(A/B/C)			CL-TS2-1-R50-240-(A/B/C)		
Max Input Current (V in Low)	9			9			8			7		
Max Output Current (A)	7	8.2	8.8	6.2	6.8	7.5	5.2	6	6.6	4.5	5.2	5.9
Unit Size W x D x H mm	440 x 240 x 230											
Weight (kg)	26			26			26			26		
Packed Size W x D x H mm	560 x 360 x 430											
Packed Weight	59			59			59			59		

	R35			R40			R45			R50		
kVA Rating	2.4	2.6	2.9	2	2.2	2.4	1.7	1.9	2.2	1.4	1.7	1.9
Model	CL-TS2.5-1-R35-240-(A/B/C)			CL-TS2.5-1-R40-240-(A/B/C)			CL-TS2.5-1-R45-240-(A/B/C)			CL-TS2.5-1-R50-240-(A/B/C)		
Max Input Current (V in Low)	14			12			10			9		
Max Output Current (A)	10	11	12	8.4	9	10	7	8	9	6	7	8
Unit Size W x D x H mm	440 x 240 x 230											
Weight (kg)	26			26			26			26		
Packed Size W x D x H mm	560 x 360 x 430											
Packed Weight	59			59			59			59		



# Single Phase 240V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3	Output Set Point (V)	240			240			240			240			240			240		
	Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
	Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
	Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
	Input Correction Range (V)	219 to 249	225 to 255	231 to 261	211 to 253	219 to 261	227 to 269	206 to 254	216 to 264	226 to 274	202 to 256	213 to 267	224 to 278	198 to 258	210 to 270	222 to 282	190 to 262	204 to 276	218 to 290
	Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
	Output Tolerance Range (V)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	20.2	20.6	21.4	13.9	14.4	14.9	12	12.5	13	10.3	11	11.5	9.1	9.6	10.1	7.2	7.7	8.4
	Model	CL-TS3-1-R12.5-240-(A/B/C)			CL-TS3-1-R17.5-240-(A/B/C)			CL-TS3-1-R20-240-(A/B/C)			CL-TS3-1-R22.5-240-(A/B/C)			CL-TS3-1-R25-240-(A/B/C)			CL-TS3-1-R30-240-(A/B/C)		
	Max Input Current (V in Low)	94			67			59			52			47			39		
	Max Output Current (A)	84	86	89	58	60	62	50	52	54	43	46	48	38	40	42	30	32	35
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	51			51			51			51			51			51		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	122			122			122			122			122			122		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	30.2	31	31.9	20.9	21.6	22.6	17.8	18.7	19.4	15.6	16.3	17.3	13.7	14.4	15.1	10.8	11.5	12.5
	Model	CL-TS3.5-1-R12.5-240-(A/B/C)			CL-TS3.5-1-R17.5-240-(A/B/C)			CL-TS3.5-1-R20-240-(A/B/C)			CL-TS3.5-1-R22.5-240-(A/B/C)			CL-TS3.5-1-R25-240-(A/B/C)			CL-TS3.5-1-R30-240-(A/B/C)		
	Max Input Current (V in Low)	141			101			88			79			70			58		
	Max Output Current (A)	126	129	133	87	90	94	74	78	81	65	68	72	57	60	63	45	48	52
	Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
	Weight (kg)	60			60			60			60			60			60		
	Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
	Packed Weight	131			131			131			131			131			131		

	R35			R40			R45			R50		
Output Set Point (V)	240			240			240			240		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	181 to 265	198 to 282	215 to 299	173 to 269	192 to 288	211 to 307	164 to 272	186 to 294	208 to 316	156 to 276	180 to 300	196 to 311
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	6	6.5	7	5	5.5	6	4.1	4.8	5.3	3.6	4.1	4.6
Model	CL-TS3-1-R35-240-(A/B/C)			CL-TS3-1-R40-240-(A/B/C)			CL-TS3-1-R45-240-(A/B/C)			CL-TS3-1-R50-240-(A/B/C)		
Max Input Current (V in Low)	34			30			25			24		
Max Output Current (A)	25	27	29	21	23	25	17	20	22	15	17	19
Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
Weight (kg)	51			51			51			51		
Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
Packed Weight	122			122			122			122		

	R35			R40			R45			R50		
kVA Rating	8.9	9.8	10.6	7.4	8.2	9.1	6.2	7.2	7.9	5.3	6.2	7
Model	CL-TS3.5-1-R35-240-(A/B/C)			CL-TS3.5-1-R40-240-(A/B/C)			CL-TS3.5-1-R45-240-(A/B/C)			CL-TS3.5-1-R50-240-(A/B/C)		
Max Input Current (V in Low)	50			44			39			35		
Max Output Current (A)	37	41	44	31	34	38	26	30	33	22	26	29
Unit Size W x D x H mm	485 x 265 x 355			485 x 265 x 355			485 x 265 x 355			485 x 265 x 355		
Weight (kg)	60			60			60			60		
Packed Size W x D x H mm	590 x 380 x 560			590 x 380 x 560			590 x 380 x 560			590 x 380 x 560		
Packed Weight	131			131			131			131		



# Single Phase 240V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V)	240			240			240			240			240			240		
Output Set Point Range (V)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +7.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V)	219 to 249	225 to 255	231 to 261	211 to 253	219 to 261	227 to 269	206 to 254	216 to 264	226 to 274	202 to 256	213 to 267	224 to 278	198 to 258	210 to 270	222 to 282	190 to 262	204 to 276	218 to 290
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS4	kVA Rating	40.8	41.3	42.5	27.6	36	37.4	23.8	25	25.9	20.6	21.8	22.8	18	19.2	20.4	14.4	15.6	16.8
Model	CL-TS4-1-R12.5-240-(A/B/C)			CL-TS4-1-R17.5-240-(A/B/C)			CL-TS4-1-R20-240-(A/B/C)			CL-TS4-1-R22.5-240-(A/B/C)			CL-TS4-1-R25-240-(A/B/C)			CL-TS4-1-R30-240-(A/B/C)			
Max Input Current (V in Low)	190			133			118			104			93			77			
Max Output Current (A)	170	172	177	115	150	156	99	104	108	86	91	95	75	80	85	60	65	70	
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			
Weight (kg)	90			90			90			90			90			90			
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			
Packed Weight	205			205			205			205			205			205			

	R12.5			R17.5			R20			R22.5			R25			R30			
TS5	kVA Rating	50.4	51.6	53	34.6	36	37.4	29.8	31	32.4	25.9	27.1	28.6	22.8	24	25.4	18	19.4	20.9
Model	CL-TS5-1-R12.5-240-(A/B/C)			CL-TS5-1-R17.5-240-(A/B/C)			CL-TS5-1-R20-240-(A/B/C)			CL-TS5-1-R22.5-240-(A/B/C)			CL-TS5-1-R25-240-(A/B/C)			CL-TS5-1-R30-240-(A/B/C)			
Max Input Current (V in Low)	235			167			147			131			117			97			
Max Output Current (A)	210	215	221	144	150	156	124	129	135	108	113	119	95	100	106	75	81	87	
Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			
Weight (kg)	97			97			97			97			97			97			
Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			
Packed Weight	212			212			212			212			212			212			

	R35			R40			R45			R50		
Output Set Point (V)	240			240			240			240		
Output Set Point Range (V)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (%)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V)	181 to 265	198 to 282	215 to 299	173 to 269	192 to 288	211 to 307	164 to 272	186 to 294	208 to 316	156 to 276	180 to 300	196 to 311
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R35			R40			R45			R50			
TS4	kVA Rating	12	16.3	17.5	9.8	10.8	12	8.4	9.6	10.6	7.2	8.2	9.4
	Model	CL-TS4-1-R35-240-(A/B/C)			CL-TS4-1-R40-240-(A/B/C)			CL-TS4-1-R45-240-(A/B/C)			CL-TS4-1-R50-240-(A/B/C)		
	Max Input Current (V in Low)	68			58			52			47		
	Max Output Current (A)	50	68	73	41	45	50	35	40	44	30	34	39
	Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430		
	Weight (kg)	90			90			90			90		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	205			205			205			205		

	R35			R40			R45			R50			
TS5	kVA Rating	14.9	16.3	17.5	12.2	13.7	15.1	10.6	12	13.2	8.9	10.3	11.5
	Model	CL-TS5-1-R35-240-(A/B/C)			CL-TS5-1-R40-240-(A/B/C)			CL-TS5-1-R45-240-(A/B/C)			CL-TS5-1-R50-240-(A/B/C)		
	Max Input Current (V in Low)	84			72			66			58		
	Max Output Current (A)	62	68	73	51	57	63	44	50	55	37	43	48
	Unit Size W x D x H mm	610 x 425 x 430			610 x 425 x 430			610 x 425 x 430			610 x 425 x 430		
	Weight (kg)	97			97			97			97		
	Packed Size W x D x H mm	710 x 530 x 630			710 x 530 x 630			710 x 530 x 630			710 x 530 x 630		
	Packed Weight	212			212			212			212		

# Three Phase

## → TS Series

### Electromechanical Voltage Stabilisers

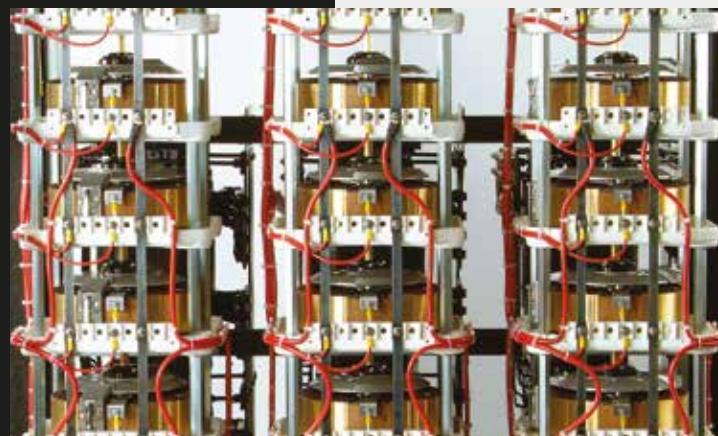
#### Micropocessor Control

Introducing the TS series of electromechanical, solid-state voltage stabilisers – reliable and rugged units using a sophisticated microprocessor control system to continuously monitor and adjust and maintain voltage levels. The tried and tested TS design delivers highly cost-effective, stepless voltage stabilisation without added waveform distortion.

With a huge standard range of single phase models and numerous customisation possibilities, we can supply the perfect solution for you.

## Features

- Ultra-fast voltage stabilisation
- Fine output tolerances – user selectable ±0.32% to ±1.6%.
- Great versatility and reliability
- High efficiency – approx. 98% at full load
- No added waveform distortion
- Unaffected by supply frequency variation
- Wide range of standard models available
- Non-standard models available on request
- In-house design and manufacture to meet customer specification



# Standard Range Typical Specifications

## Input Voltage

Nominal Voltages*	Standard voltage model options: 380, 400, 415V Low voltage model options: 190, 200, 208V
Ranges	+/-3.75% to +/-35%
Frequency*	47-65Hz

## Enclosure\*

IP Rating	IP20*
Mounting	Floorstanding*
Material	Sheet Mild Steel Construction*
Finish	Standard Commercial Powder Coat*

## Output Voltage

Nominal Voltages*	Standard model voltage options: 380, 400, 415V Low voltage model options: 190, 200, 208V
Tolerance*	$\pm 0.55\%$ default (options $\pm 0.32\%$ , $\pm 0.55\%$ , $\pm 0.9\%$ , $\pm 1.6\%$ )
Adjustment*	Standard voltage output range: 346-440V Low voltage output range: 173-220V

## Packing

Commercial	Standard
Export Crate	Optional

## System

Response Time	Range / voltage / model dependant
Waveform Distortion	Negligible
Efficiency	Typically $\geq 98\%$
Overload Capacity	5 times for 1 second, 3 times for 2 minutes

## Optional Extras

Bypass Switch	Over and Undervoltage Relay
Internal Alarm Sounder	Overcurrent Detection
IP00 Open Frame	Phase Loss Detection
IP65 - External Enclosure	Rack Mount
LCD User Interface	Remote Sensing
Lightning Protection	Safe Start
Metering - Analogue or Digital	System Event Log
Noise, Spike and Transient Protection	System Status Displayed
Output Contactor	Volt-free Alarm Contacts
Isolation Transformers	Three Phase Delta Systems

\*Other values, ranges and options available upon request.

## Environmental

Operational Temperature	-5°C to +45°C
Maximum Mean Temperature	+35°C over 24 hours
Humidity	95% Non-Condensing
Cooling	Natural Air Cooled
Altitude	Above 1000m derate by 2.5% / 500m



## Three Phase 190V TS Voltage Stabilisers

	R12.5			R20			R25			R30			R40			R50		
Output Set Point (V L-L)	190			190			190			190			190			190		
Output Set Point (V L-N)	110			110			110			110			110			110		
Output Set Point Range (V L-L)	173-220			173-220			173-220			173-220			173-220			173-220		
Output Set Point Range (V L-N)	100-127			100-127			100-127			100-127			100-127			100-127		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-14% to +6%	±10%	-6% to +14%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%	-28% to +12%	±20%	-12% to +28%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V L-L)	173 to 197	178 to 202	183 to 207	163 to 201	171 to 209	179 to 217	157 to 204	166 to 214	176 to 223	150 to 207	162 to 219	173 to 230	137 to 213	152 to 228	167 to 243	124 to 219	143 to 238	162 to 257
Input Correction Range (V L-N)	100 to 114	103 to 117	106 to 120	95 to 117	99 to 121	103 to 125	91 to 118	96 to 124	102 to 129	87 to 120	94 to 127	100 to 133	79 to 123	88 to 132	97 to 141	72 to 127	83 to 138	94 to 149
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	189 to 191 (±0.55%)			189 to 191 (±0.55%)			189 to 191 (±0.55%)			189 to 191 (±0.55%)			189 to 191 (±0.55%)			189 to 191 (±0.55%)		
Output Tolerance Range (V L-N)	109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)			109 to 111 (±0.55%)		

	R12.5			R20			R25			R30			R40			R50		
kVA Rating	16.8	17.2	17.5	9.9	10.2	10.7	7.6	7.9	8.4	6	6.4	6.9	4.1	4.6	5	3	3.4	3.9
Model	CL-TS2L-3-R12.5-190-(A/B/C)			CL-TS2L-3-R20-190-(A/B/C)			CL-TS2L-3-R25-190-(A/B/C)			CL-TS2L-3-R30-190-(A/B/C)			CL-TS2L-3-R40-190-(A/B/C)			CL-TS2L-3-R50-190-(A/B/C)		
Max Input Current (V in Low)	57			35			28			24			18			14		
Max Output Current (A)	51	52	53	30	31	32.5	23	24	25.4	18.3	19.5	21	12.5	14	15.1	9	10.3	11.7
Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
Weight (kg)	85			85			85			85			85			85		
Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
Packed Weight	189			189			189			189			189			189		

	R12.5			R20			R25			R30			R40			R50			
TS3L	kVA Rating	41.6	42.9	43.9	24.4	25.7	26.7	18.8	19.8	21.1	15.2	16.2	17.5	10.2	11.6	12.5	7.43	8.58	9.9
	Model	CL-TS3L-3-R12.5-190-(A/B/C)	CL-TS3L-3-R20-190-(A/B/C)	CL-TS3L-3-R25-190-(A/B/C)	CL-TS3L-3-R30-190-(A/B/C)	CL-TS3L-3-R40-190-(A/B/C)	CL-TS3L-3-R50-190-(A/B/C)												
	Max Input Current (V in Low)	141			87			70			59			44			35		
	Max Output Current (A)	126	130	133	74	78	81	57	60	64	46	49	53	31	35	38	22.5	26	30
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R12.5			R20			R25			R30			R40			R50			
TS5L	kVA Rating	138.0	142	146	81.2	85.1	89.1	62.4	66	70	49.8	53.8	57.8	34.3	38	41.6	24.8	28.4	32.3
	Model	CL-TS5L-3-R12.5-190-(A/B/C)	CL-TS5L-3-R20-190-(A/B/C)	CL-TS5L-3-R25-190-(A/B/C)	CL-TS5L-3-R30-190-(A/B/C)	CL-TS5L-3-R40-190-(A/B/C)	CL-TS5L-3-R50-190-(A/B/C)												
	Max Input Current (V in Low)	470			291			233			195			148			117		
	Max Output Current (A)	419	430	441	246	258	270	189	200	212	151	163	175	104	115	126	75	86	98
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647			647			647		



## Three Phase 200V TS Voltage Stabilisers

	R12.5			R20			R25			R30			R40			R50		
Output Set Point (V L-L)	200			200			200			200			200			200		
Output Set Point (V L-N)	115			115			115			115			115			115		
Output Set Point Range (V L-L)	173-220			173-220			173-220			173-220			173-220			173-220		
Output Set Point Range (V L-N)	100-127			100-127			100-127			100-127			100-127			100-127		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-14% to +6%	±10%	-6% to +14%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%	-28% to +12%	±20%	-12% to +28%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V L-L)	183 to 208	188 to 213	193 to 218	172 to 212	180 to 220	188 to 228	165 to 215	175 to 225	185 to 235	158 to 218	170 to 230	182 to 242	144 to 224	160 to 240	176 to 256	130 to 230	150 to 250	170 to 270
Input Correction Range (V L-N)	105 to 119	108 to 122	111 to 125	99 to 122	104 to 127	108 to 131	95 to 124	101 to 129	106 to 135	91 to 125	98 to 132	105 to 139	83 to 129	92 to 138	101 to 147	75 to 132	86 to 144	98 to 155
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	199 to 201 (±0.55%)			199 to 201 (±0.55%)			199 to 201 (±0.55%)			199 to 201 (±0.55%)			199 to 201 (±0.55%)			199 to 201 (±0.55%)		
Output Tolerance Range (V L-N)	114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)			114 to 116 (±0.55%)		

	R12.5			R20			R25			R30			R40			R50			
TS2L	kVA Rating	17.7	18	18.4	10.4	10.7	11.3	8	8.3	8.8	6.3	6.8	7.3	4.3	4.8	5.2	3.1	3.6	4.1
	Model	CL-TS2L-3-R12.5-200-(A/B/C)	CL-TS2L-3-R20-200-(A/B/C)	CL-TS2L-3-R25-200-(A/B/C)	CL-TS2L-3-R30-200-(A/B/C)	CL-TS2L-3-R40-200-(A/B/C)	CL-TS2L-3-R50-200-(A/B/C)												
	Max Input Current (V in Low)	57			35			28			24			18			14		
	Max Output Current (A)	51	52	53	30	31	32.5	23	24	25.4	18.3	19.5	21	12.5	14	15.1	9	10.3	11.7
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	85			85			85			85			85			85		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	189			189			189			189			189			189		

	R12.5			R20			R25			R30			R40			R50			
TS3L	kVA Rating	43.6	45	46.1	25.6	27	28.1	19.7	20.8	22.2	15.9	17	18.4	10.7	12.1	13.2	7.8	9	10.4
	Model	CL-TS3L-3-R12.5-200-(A/B/C)	CL-TS3L-3-R20-200-(A/B/C)	CL-TS3L-3-R25-200-(A/B/C)	CL-TS3L-3-R30-200-(A/B/C)	CL-TS3L-3-R40-200-(A/B/C)	CL-TS3L-3-R50-200-(A/B/C)												
	Max Input Current (V in Low)	141			88			71			60			44			35		
	Max Output Current (A)	126	130	133	74	78	81	57	60	64	46	49	53	31	35	38	22.5	26	30
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R12.5			R20			R25			R30			R40			R50			
TS5L	kVA Rating	145.1	149	152.8	85.2	89.4	93.5	65.5	69.3	73.4	52.3	56.5	60.6	36	39.8	43.6	26	29.8	33.9
	Model	CL-TS5L-3-R12.5-200-(A/B/C)	CL-TS5L-3-R20-200-(A/B/C)	CL-TS5L-3-R25-200-(A/B/C)	CL-TS5L-3-R30-200-(A/B/C)	CL-TS5L-3-R40-200-(A/B/C)	CL-TS5L-3-R50-200-(A/B/C)												
	Max Input Current (V in Low)	470			293			234			195			148			118		
	Max Output Current (A)	419	430	441	246	258	270	189	200	212	151	163	175	104	115	126	75	86	98
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647			647			647		



## Three Phase 208V TS Voltage Stabilisers

	R12.5			R20			R25			R30			R40			R50		
Output Set Point (V L-L)	208			208			208			208			208			208		
Output Set Point (V L-N)	120			120			120			120			120			120		
Output Set Point Range (V L-L)	173-220			173-220			173-220			173-220			173-220			173-220		
Output Set Point Range (V L-N)	100-127			100-127			100-127			100-127			100-127			100-127		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-14% to +6%	±10%	-6% to +14%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%	-28% to +12%	±20%	-12% to +28%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V L-L)	190 to 216	195 to 221	200 to 226	179 to 220	187 to 229	196 to 237	172 to 224	182 to 234	192 to 244	164 to 227	177 to 239	189 to 252	150 to 233	166 to 250	183 to 266	135 to 239	156 to 260	177 to 281
Input Correction Range (V L-N)	110 to 125	113 to 128	116 to 131	103 to 127	108 to 132	113 to 137	99 to 129	105 to 135	111 to 141	95 to 131	102 to 138	109 to 145	86 to 134	96 to 144	106 to 154	78 to 138	90 to 150	102 to 162
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	207 to 209 (±0.55%)			207 to 209 (±0.55%)			207 to 209 (±0.55%)			207 to 209 (±0.55%)			207 to 209 (±0.55%)			207 to 209 (±0.55%)		
Output Tolerance Range (V L-N)	119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)			119 to 121 (±0.55%)		

	R12.5			R20			R25			R30			R40			R50			
TS2L	kVA Rating	18.4	18.7	19.1	10.8	11.2	11.7	8.3	8.6	9.2	6.6	7	7.6	4.5	5	5.4	3.2	3.7	4.2
	Model	CL-TS2L-3-R12.5-208-(A/B/C)	CL-TS2L-3-R20-208-(A/B/C)	CL-TS2L-3-R25-208-(A/B/C)	CL-TS2L-3-R30-208-(A/B/C)	CL-TS2L-3-R40-208-(A/B/C)	CL-TS2L-3-R50-208-(A/B/C)												
	Max Input Current (V in Low)	57			35			28			24			18			14		
	Max Output Current (A)	51	52	53	30	31	32.5	23	24	25.4	18.3	19.5	21	12.5	14	15.1	9	10.3	11.7
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	85			85			85			85			85			85		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	189			189			189			189			189			189		

	R12.5			R20			R25			R30			R40			R50			
TS3L	kVA Rating	45.4	46.8	47.9	26.7	28.1	29.2	20.5	21.6	23.1	16.6	17.7	19.1	11.2	12.6	13.7	8.1	9.4	10.8
	Model	CL-TS3L-3-R12.5-208-(A/B/C)	CL-TS3L-3-R20-208-(A/B/C)	CL-TS3L-3-R25-208-(A/B/C)	CL-TS3L-3-R30-208-(A/B/C)	CL-TS3L-3-R40-208-(A/B/C)	CL-TS3L-3-R50-208-(A/B/C)												
	Max Input Current (V in Low)	140			88			71			59			44			35		
	Max Output Current (A)	126	130	133	74	78	81	57	60	64	46	49	53	31	35	38	22.5	26	30
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R12.5			R20			R25			R30			R40			R50			
TS5L	kVA Rating	150.9	154.9	158.9	88.6	92.9	97.3	68.1	72.1	76.4	54.4	58.7	63	37.5	41.4	45.4	27	31	35.3
	Model	CL-TS5L-3-R12.5-208-(A/B/C)	CL-TS5L-3-R20-208-(A/B/C)	CL-TS5L-3-R25-208-(A/B/C)	CL-TS5L-3-R30-208-(A/B/C)	CL-TS5L-3-R40-208-(A/B/C)	CL-TS5L-3-R50-208-(A/B/C)												
	Max Input Current (V in Low)	467			293			234			195			148			118		
	Max Output Current (A)	419	430	441	246	258	270	189	200	212	151	163	175	104	115	126	75	86	98
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647			647			647		



## Three Phase 380V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V L-L)	380			380			380			380			380			380		
Output Set Point (V L-N)	220			220			220			220			220			220		
Output Set Point Range (V L-L)	346-440			346-440			346-440			346-440			346-440			346-440		
Output Set Point Range (V L-N)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V L-L)	347 to 394	356 to 404	366 to 413	333 to 400	347 to 413	360 to 427	327 to 403	342 to 418	357 to 433	320 to 406	337 to 423	354 to 440	314 to 409	333 to 428	352 to 447	300 to 414	323 to 437	346 to 460
Input Correction Range (V L-N)	201 to 228	206 to 234	212 to 239	193 to 232	201 to 239	208 to 247	189 to 233	198 to 242	207 to 251	185 to 235	195 to 223	205 to 255	182 to 237	193 to 248	204 to 259	174 to 240	187 to 253	200 to 266
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	378 to 382 (±0.55%)			378 to 382 (±0.55%)			378 to 382 (±0.55%)			378 to 382 (±0.55%)			378 to 382 (±0.55%)			378 to 382 (±0.55%)		
Output Tolerance Range (V L-N)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2	kVA Rating	16.5	17.1	17.4	11.2	11.8	12.5	9.9	10.2	10.9	8.6	9	9.5	7.5	7.9	8.4	6.1	6.4	6.9
	Model	CL-TS2-3-R12.5-380-(A/B/C)			CL-TS2-3-R17.5-380-(A/B/C)			CL-TS2-3-R20-380-(A/B/C)			CL-TS2-3-R22.5-380-(A/B/C)			CL-TS2-3-R25-380-(A/B/C)			CL-TS2-3-R30-380-(A/B/C)		
	Max Input Current (V in Low)	28			20			18			16			14			12		
	Max Output Current (A)	25	26	26.4	17	18	19	15	15.5	16.5	13	13.6	14.5	11.4	12	12.7	9.2	9.8	10.5
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	85			85			85			85			85			85		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	189			189			189			189			189			189		

	R35			R40			R45			R50		
Output Set Point (V L-L)	380			380			380			380		
Output Set Point (V L-N)	220			220			220			220		
Output Set Point Range (V L-L)	346-440			346-440			346-440			346-440		
Output Set Point Range (V L-N)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V L-L)	287 to 420	314 to 447	340 to 473	274 to 426	304 to 456	334 to 486	260 to 431	295 to 466	329 to 500	247 to 437	285 to 475	323 to 513
Input Correction Range (V L-N)	166 to 243	182 to 259	197 to 274	158 to 246	176 to 264	194 to 282	151 to 250	171 to 270	190 to 289	143 to 253	165 to 275	187 to 297
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	378 to 382 (±0.55%)			378 to 382 (±0.55%)			378 to 382 (±0.55%)			378 to 382 (±0.55%)		
Output Tolerance Range (V L-N)	219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)			219 to 221 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	4.9	5.4	5.8	4.1	4.5	4.9	3.4	3.9	4.3	3	3.4	3.9
Model	CL-TS2-3-R35-380-(A/B/C)			CL-TS2-3-R40-380-(A/B/C)			CL-TS2-3-R45-380-(A/B/C)			CL-TS2-3-R50-380-(A/B/C)		
Max Input Current (V in Low)	10			9			8			7		
Max Output Current (A)	7.5	8.2	8.8	6.2	6.8	7.5	5.2	6	6.6	4.5	5.2	5.9
Unit Size W x D x H mm	315 x 420 x 810											
Weight (kg)	85			85			85			85		
Packed Size W x D x H mm	430 x 530 x 1010											
Packed Weight	189			189			189			189		



## Three Phase 380V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2.5	kVA Rating	22.4	22.4	23.7	15.1	15.8	16.5	13.2	13.8	14.5	11.5	11.8	12.5	9.9	10.5	11.2	7.9	8.6	9.2
	Model	CL-TS2.5-3-R12.5-380-(A/B/C)			CL-TS2.5-3-R17.5-380-(A/B/C)			CL-TS2.5-3-R20-380-(A/B/C)			CL-TS2.5-3-R22.5-380-(A/B/C)			CL-TS2.5-3-R25-380-(A/B/C)			CL-TS2.5-3-R30-380-(A/B/C)		
	Max Input Current (V in Low)	38			27			24			21			18			15		
	Max Output Current (A)	34	34	36	23	24	25	20	21	22	17.5	18	19	15	16	17	12	13	14
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	86			86			86			86			86			86		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	190			190			190			190			190			190		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3	kVA Rating	55.3	56.6	58.6	38.2	39.5	40.8	32.9	34.2	35.5	28.3	30.3	31.6	25	26.3	27.6	19.7	21.1	23
	Model	CL-TS3-3-R12.5-380-(A/B/C)			CL-TS3-3-R17.5-380-(A/B/C)			CL-TS3-3-R20-380-(A/B/C)			CL-TS3-3-R22.5-380-(A/B/C)			CL-TS3-3-R25-380-(A/B/C)			CL-TS3-3-R30-380-(A/B/C)		
	Max Input Current (V in Low)	94			67			59			52			47			39		
	Max Output Current (A)	84	86	89	58	60	62	50	52	54	43	46	48	38	40	42	30	32	35
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	82.9	84.9	87.5	57.3	59.2	61.9	48.7	51.3	53.3	42.8	44.8	47.4	37.5	39.5	41.5	29.6	31.6	34.2
	Model	CL-TS3.5-3-R12.5-380-(A/B/C)			CL-TS3.5-3-R17.5-380-(A/B/C)			CL-TS3.5-3-R20-380-(A/B/C)			CL-TS3.5-3-R22.5-380-(A/B/C)			CL-TS3.5-3-R25-380-(A/B/C)			CL-TS3.5-3-R30-380-(A/B/C)		
	Max Input Current (V in Low)	140			101			88			79			70			58		
	Max Output Current (A)	126	129	133	87	90	94	74	78	81	65	68	72	57	60	63	45	48	52
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R35			R40			R45			R50			
TS2.5	kVA Rating	6.6	7.2	7.9	5.5	5.9	6.6	4.6	5.3	5.9	3.9	4.6	5.3
	Model	CL-TS2.5-3-R35-380-(A/B/C)			CL-TS2.5-3-R40-380-(A/B/C)			CL-TS2.5-3-R45-380-(A/B/C)			CL-TS2.5-3-R50-380-(A/B/C)		
	Max Input Current (V in Low)	13			12			10			9		
	Max Output Current (A)	10	11	12	8.4	9	10	7	8	9	6	7	8
	Unit Size W x D x H mm	315 x 420 x 810											
	Weight (kg)	86			86			86			86		
	Packed Size W x D x H mm	430 x 530 x 1010											
	Packed Weight	190			190			190			190		

	R35			R40			R45			R50			
TS3	kVA Rating	16.5	17.8	19.1	13.8	15.1	16.5	11.2	13.2	14.5	9.9	11.2	12.5
	Model	CL-TS3-3-R35-380-(A/B/C)			CL-TS3-3-R40-380-(A/B/C)			CL-TS3-3-R45-380-(A/B/C)			CL-TS3-3-R50-380-(A/B/C)		
	Max Input Current (V in Low)	34			30			25			23		
	Max Output Current (A)	25	27	29	21	23	25	17	20	22	15	17	19
	Unit Size W x D x H mm	315 x 560 x 1035											
	Weight (kg)	185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240											
	Packed Weight	395			395			395			395		

	R35			R40			R45			R50			
TS3.5	kVA Rating	24.4	27	29	20.4	22.4	25	17.1	19.7	21.7	14.5	17.1	19.1
	Model	CL-TS3.5-3-R35-380-(A/B/C)			CL-TS3.5-3-R40-380-(A/B/C)			CL-TS3.5-3-R45-380-(A/B/C)			CL-TS3.5-3-R50-380-(A/B/C)		
	Max Input Current (V in Low)	50			44			39			34		
	Max Output Current (A)	37	41	44	31	34	38	26	30	33	22	26	29
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395		



## Three Phase 380V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS4	kVA Rating	111.9	113.2	116.5	75.7	79	81.6	65.2	68.4	71.1	56.6	59.9	62.5	49.4	52.7	55.9	39.5	42.8	46.1
	Model	CL-TS4-3-R12.5-380-(A/B/C)			CL-TS4-3-R17.5-380-(A/B/C)			CL-TS4-3-R20-380-(A/B/C)			CL-TS4-3-R22.5-380-(A/B/C)			CL-TS4-3-R25-380-(A/B/C)			CL-TS4-3-R30-380-(A/B/C)		
	Max Input Current (V in Low)	189			133			117			104			92			77		
	Max Output Current (A)	170	172	177	115	120	124	99	104	108	86	91	95	75	80	85	60	65	70
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	290			290			290			290			290			290		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	630			630			630			630			630			630		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS5	kVA Rating	138.2	141.5	145.5	94.8	98.7	102.7	81.6	84.9	88.9	71.1	74.4	78.3	62.5	65.8	69.8	49.4	53.3	57.3
	Model	CL-TS5-3-R12.5-380-(A/B/C)			CL-TS5-3-R17.5-380-(A/B/C)			CL-TS5-3-R20-380-(A/B/C)			CL-TS5-3-R22.5-380-(A/B/C)			CL-TS5-3-R25-380-(A/B/C)			CL-TS5-3-R30-380-(A/B/C)		
	Max Input Current (V in Low)	234			167			147			131			117			96		
	Max Output Current (A)	210	215	221	144	150	156	124	129	135	108	113	119	95	100	106	75	81	87
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647			647			647		

		R35			R40			R45			R50		
TS4	kVA Rating	32.9	35.5	38.8	27	29.6	32.9	23	26.3	29	19.7	22.4	25.7
	Model	CL-TS4-3-R35-380-(A/B/C)			CL-TS4-3-R40-380-(A/B/C)			CL-TS4-3-R45-380-(A/B/C)			CL-TS4-3-R50-380-(A/B/C)		
	Max Input Current (V in Low)	67			58			52			47		
	Max Output Current (A)	50	54	59	41	45	50	35	40	44	30	34	39
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	290			290			290			290		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	630			630			630			630		

		R35			R40			R45			R50		
TS5	kVA Rating	40.8	44.8	48	33.6	37.5	41.5	29	32.9	36.2	24.4	28.3	31.6
	Model	CL-TS5-3-R35-380-(A/B/C)			CL-TS5-3-R40-380-(A/B/C)			CL-TS5-3-R45-380-(A/B/C)			CL-TS5-3-R50-380-(A/B/C)		
	Max Input Current (V in Low)	84			72			65			58		
	Max Output Current (A)	62	68	73	51	57	63	44	50	55	37	43	48
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647		



## Three Phase 400V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V L-L)	400			400			400			400			400			400		
Output Set Point (V L-N)	230			230			230			230			230			230		
Output Set Point Range (V L-L)	346-440			346-440			346-440			346-440			346-440			346-440		
Output Set Point Range (V L-N)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V L-L)	365 to 415	375 to 425	385 to 435	351 to 421	365 to 435	379 to 449	344 to 423	360 to 440	376 to 456	337 to 427	355 to 445	373 to 463	330 to 430	350 to 450	370 to 470	316 to 436	340 to 460	364 to 484
Input Correction Range (V L-N)	210 to 239	216 to 244	221 to 250	202 to 242	210 to 250	218 to 258	198 to 244	207 to 253	216 to 262	194 to 246	204 to 256	214 to 266	190 to 247	201 to 259	213 to 270	182 to 251	196 to 265	209 to 278
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	398 to 402 (±0.55%)			398 to 402 (±0.55%)			398 to 402 (±0.55%)			398 to 402 (±0.55%)			398 to 402 (±0.55%)			398 to 402 (±0.55%)		
Output Tolerance Range (V L-N)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2	kVA Rating	17.3	18	18.3	11.8	12.5	13.2	10.4	10.7	11.4	9	9.4	10	7.9	8.3	8.8	6.4	6.8	7.3
	Model	CL-TS2-3-R12.5-400-(A/B/C)			CL-TS2-3-R17.5-400-(A/B/C)			CL-TS2-3-R20-400-(A/B/C)			CL-TS2-3-R22.5-400-(A/B/C)			CL-TS2-3-R25-400-(A/B/C)			CL-TS2-3-R30-400-(A/B/C)		
	Max Input Current (V in Low)	28			20			18			16			14			12		
	Max Output Current (A)	25	26	26.4	17	18	19	15	15.5	16.5	13	13.6	14.5	11.4	12	12.7	9.2	9.8	10.5
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	85			85			85			85			85			85		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	189			189			189			189			189			189		

	R35			R40			R45			R50		
Output Set Point (V L-L)	400			400			400			400		
Output Set Point (V L-N)	230			230			230			230		
Output Set Point Range (V L-L)	346-440			346-440			346-440			346-440		
Output Set Point Range (V L-N)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V L-L)	302 to 442	330 to 470	358 to 498	288 to 448	320 to 480	352 to 512	274 to 454	310 to 490	346 to 526	260 to 460	300 to 500	340 to 540
Input Correction Range (V L-N)	174 to 254	190 to 270	206 to 286	166 to 258	184 to 276	202 to 294	158 to 261	178 to 282	199 to 302	150 to 265	173 to 288	196 to 311
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	398 to 402 (±0.55%)			398 to 402 (±0.55%)			398 to 402 (±0.55%)			398 to 402 (±0.55%)		
Output Tolerance Range (V L-N)	229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)			229 to 231 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	5.2	5.7	6.1	4.3	4.7	5.2	3.6	4.2	4.6	3.1	3.6	4.1
Model	CL-TS2-3-R35-400-(A/B/C)			CL-TS2-3-R40-400-(A/B/C)			CL-TS2-3-R45-400-(A/B/C)			CL-TS2-3-R50-400-(A/B/C)		
Max Input Current (V in Low)	10			9			8			7		
Max Output Current (A)	7.5	8.2	8.8	6.2	6.8	7.5	5.2	6	6.6	4.5	5.2	5.9
Unit Size W x D x H mm	315 x 420 x 810											
Weight (kg)	85			85			85			85		
Packed Size W x D x H mm	430 x 530 x 1010											
Packed Weight	189			189			189			189		



## Three Phase 400V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2.5	kVA Rating	23.6	23.6	24.9	15.9	16.6	17.3	13.9	14.5	15.2	12.1	12.5	13.2	10.4	11.1	11.8	8.3	9	9.7
	Model	CL-TS2.5-3-R12.5-400-(A/B/C)	CL-TS2.5-3-R17.5-400-(A/B/C)	CL-TS2.5-3-R20-400-(A/B/C)	CL-TS2.5-3-R22.5-400-(A/B/C)	CL-TS2.5-3-R25-400-(A/B/C)	CL-TS2.5-3-R30-400-(A/B/C)												
	Max Input Current (V in Low)	38			27			24			21			19			16		
	Max Output Current (A)	34	34	36	23	24	25	20	21	22	17.5	18	19	15	16	17	12	13	14
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	86			86			86			86			86			86		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	190			190			190			190			190			190		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3	kVA Rating	58.2	59.6	61.7	40.2	41.6	43	34.6	36	37.4	29.8	31.9	33.3	26.3	27.7	29.1	20.8	22.2	24.2
	Model	CL-TS3-3-R12.5-400-(A/B/C)	CL-TS3-3-R17.5-400-(A/B/C)	CL-TS3-3-R20-400-(A/B/C)	CL-TS3-3-R22.5-400-(A/B/C)	CL-TS3-3-R25-400-(A/B/C)	CL-TS3-3-R30-400-(A/B/C)												
	Max Input Current (V in Low)	94			68			59			52			47			39		
	Max Output Current (A)	84	86	89	58	60	62	50	52	54	43	46	48	38	40	42	30	32	35
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	87.3	89.4	92.1	60.3	62.4	65.1	51.3	54	56.1	45	47.1	49.9	39.5	41.6	43.6	31.2	33.3	36
	Model	CL-TS3.5-3-R12.5-400-(A/B/C)	CL-TS3.5-3-R17.5-400-(A/B/C)	CL-TS3.5-3-R20-400-(A/B/C)	CL-TS3.5-3-R22.5-400-(A/B/C)	CL-TS3.5-3-R25-400-(A/B/C)	CL-TS3.5-3-R30-400-(A/B/C)												
	Max Input Current (V in Low)	141			101			88			79			71			58		
	Max Output Current (A)	126	129	133	87	90	94	74	78	81	65	68	72	57	60	63	45	48	52
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R35			R40			R45			R50			
TS2.5	kVA Rating	6.9	7.6	8.3	5.8	6.2	6.9	4.8	5.5	6.2	4.2	4.8	5.5
	Model	CL-TS2.5-3-R35-400-(A/B/C)			CL-TS2.5-3-R40-400-(A/B/C)			CL-TS2.5-3-R45-400-(A/B/C)			CL-TS2.5-3-R50-400-(A/B/C)		
	Max Input Current (V in Low)	13			12			10			9		
	Max Output Current (A)	10	11	12	8.4	9	10	7	8	9	6	7	8
	Unit Size W x D x H mm	315 x 420 x 810											
	Weight (kg)	86			86			86			86		
	Packed Size W x D x H mm	430 x 530 x 1010											
	Packed Weight	190			190			190			190		

	R35			R40			R45			R50			
TS3	kVA Rating	17.3	18.7	20.1	14.5	15.9	17.3	11.8	13.9	15.2	10.4	11.8	13.2
	Model	CL-TS3-3-R35-400-(A/B/C)			CL-TS3-3-R40-400-(A/B/C)			CL-TS3-3-R45-400-(A/B/C)			CL-TS3-3-R50-400-(A/B/C)		
	Max Input Current (V in Low)	34			30			25			24		
	Max Output Current (A)	25	27	29	8.4	9	10	17	20	22	15	17	19
	Unit Size W x D x H mm	315 x 560 x 1035											
	Weight (kg)	185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240											
	Packed Weight	395			395			395			395		

	R35			R40			R45			R50			
TS3.5	kVA Rating	25.6	28.4	30.5	21.5	23.6	26.3	18	20.8	22.9	15.2	18	20.1
	Model	CL-TS3.5-3-R35-400-(A/B/C)			CL-TS3.5-3-R40-400-(A/B/C)			CL-TS3.5-3-R45-400-(A/B/C)			CL-TS3.5-3-R50-400-(A/B/C)		
	Max Input Current (V in Low)	50			44			39			35		
	Max Output Current (A)	37	41	44	31	34	38	26	30	33	22	26	29
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395		



## Three Phase 400V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS4	kVA Rating	117.8	119.2	122.6	79.7	83.1	85.9	68.6	72.1	74.8	59.6	63	65.8	52	55.4	58.9	41.6	45	48.5
	Model	CL-TS4-3-R12.5-400-(A/B/C)			CL-TS4-3-R17.5-400-(A/B/C)			CL-TS4-3-R20-400-(A/B/C)			CL-TS4-3-R22.5-400-(A/B/C)			CL-TS4-3-R25-400-(A/B/C)			CL-TS4-3-R30-400-(A/B/C)		
	Max Input Current (V in Low)	191			134			118			104			93			78		
	Max Output Current (A)	170	172	177	115	120	124	99	104	108	86	91	95	75	80	85	60	65	70
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	290			290			290			290			290			290		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	630			630			630			630			630			630		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS5	kVA Rating	145.5	149	153.1	99.8	103.9	108.1	85.9	89.4	93.5	74.8	78.3	82.4	65.8	69.3	73.4	52	56.1	60.3
	Model	CL-TS5-3-R12.5-400-(A/B/C)			CL-TS5-3-R17.5-400-(A/B/C)			CL-TS5-3-R20-400-(A/B/C)			CL-TS5-3-R22.5-400-(A/B/C)			CL-TS5-3-R25-400-(A/B/C)			CL-TS5-3-R30-400-(A/B/C)		
	Max Input Current (V in Low)	236			168			148			131			118			97		
	Max Output Current (A)	210	215	221	144	150	156	124	129	135	108	113	119	95	100	106	75	81	87
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647			647			647		

	R35			R40			R45			R50			
TS4	kVA Rating	34.6	37.4	40.9	28.4	31.2	34.6	24.2	27.7	30.5	20.8	23.6	27
	Model	CL-TS4-3-R35-400-(A/B/C)			CL-TS4-3-R40-400-(A/B/C)			CL-TS4-3-R45-400-(A/B/C)			CL-TS4-3-R50-400-(A/B/C)		
	Max Input Current (V in Low)	68			58			52			47		
	Max Output Current (A)	50	54	59	41	45	50	35	40	44	30	34	39
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	290			290			290			290		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	630			630			630			630		

	R35			R40			R45			R50			
TS5	kVA Rating	43	47.1	50.6	35.3	39.5	43.6	30.5	34.6	38.1	25.6	29.8	33.3
	Model	CL-TS5-3-R35-400-(A/B/C)			CL-TS5-3-R40-400-(A/B/C)			CL-TS5-3-R45-400-(A/B/C)			CL-TS5-3-R50-400-(A/B/C)		
	Max Input Current (V in Low)	84			72			66			58		
	Max Output Current (A)	62	68	73	51	57	63	44	50	55	37	43	48
	Unit Size W x D x H mm	400 x 700 x 1500											
	Weight (kg)	307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700											
	Packed Weight	647			647			647			647		



## Three Phase 415V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30		
Output Set Point (V L-L)	415			415			415			415			415			415		
Output Set Point (V L-N)	240			240			240			240			240			240		
Output Set Point Range (V L-L)	346-440			346-440			346-440			346-440			346-440			346-440		
Output Set Point Range (V L-N)	200-254			200-254			200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-8.75% to +3.75%	±6.25%	-3.75% to +8.75%	-12.25% to +5.25%	±8.75%	-5.25% to +12.25%	-14% to +6%	±10%	-6% to +14%	-15.75% to +6.75%	±11.25%	-6.75% to +15.75%	-17.5% to +7.5%	±12.5%	-7.5% to +17.5%	-21% to +9%	±15%	-9% to +21%
Input Correction Range (V L-L)	379 to 431	389 to 441	399 to 451	364 to 437	379 to 451	393 to 466	357 to 440	374 to 457	390 to 473	350 to 443	368 to 462	387 to 480	342 to 446	363 to 467	384 to 488	328 to 452	353 to 477	377 to 502
Input Correction Range (V L-N)	219 to 249	225 to 255	231 to 261	211 to 253	219 to 261	227 to 269	206 to 254	216 to 264	226 to 274	202 to 256	213 to 267	224 to 278	198 to 258	210 to 270	222 to 282	190 to 262	204 to 276	218 to 290
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	413 to 417 (±0.55%)			413 to 417 (±0.55%)			413 to 417 (±0.55%)			413 to 417 (±0.55%)			413 to 417 (±0.55%)			413 to 417 (±0.55%)		
Output Tolerance Range (V L-N)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2	kVA Rating	18	18.7	19	12.2	12.9	13.7	10.8	11.1	11.9	9.3	9.8	10.4	8.2	8.6	9.1	6.6	7	7.5
	Model	CL-TS2-3-R12.5-415-(A/B/C)			CL-TS2-3-R17.5-415-(A/B/C)			CL-TS2-3-R20-415-(A/B/C)			CL-TS2-3-R22.5-415-(A/B/C)			CL-TS2-3-R25-415-(A/B/C)			CL-TS2-3-R35-415-(A/B/C)		
	Max Input Current (V in Low)	28			20			18			16			14			12		
	Max Output Current (A)	25	26	26.4	17	18	19	15	15.5	16.5	13	13.6	14.5	11.4	12	12.7	9.2	9.8	10.5
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	85			85			85			85			85			85		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	189			189			189			189			189			189		

	R35			R40			R45			R50		
Output Set Point (V L-L)	415			415			415			415		
Output Set Point (V L-N)	240			240			240			240		
Output Set Point Range (V L-L)	346-440			346-440			346-440			346-440		
Output Set Point Range (V L-N)	200-254			200-254			200-254			200-254		
Tap Reference	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C	Tap A	Tap B	Tap C
Input Correction Range (V)	-24.5% to +10.5%	±17.5%	-10.5% to +24.5%	-28% to +12%	±20%	-12% to +28%	-31.5% to +13.5%	±22.5%	-13.5% to +31.5%	-35% to +15%	±25%	-15% to +35%
Input Correction Range (V L-L)	313 to 459	342 to 488	371 to 517	299 to 465	332 to 498	365 to 531	284 to 471	322 to 508	359 to 546	270 to 477	311 to 519	353 to 560
Input Correction Range (V L-N)	181 to 265	198 to 282	215 to 299	173 to 269	192 to 288	211 to 307	164 to 272	186 to 294	208 to 316	156 to 276	180 to 300	204 to 324
Output Tolerance Range (±%)	0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6			0.32, <b>0.55</b> , 0.9, 1.6		
Output Tolerance Range (V L-L)	413 to 417 (±0.55%)			413 to 417 (±0.55%)			413 to 417 (±0.55%)			413 to 417 (±0.55%)		
Output Tolerance Range (V L-N)	239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)			239 to 241 (±0.55%)		

	R35			R40			R45			R50		
kVA Rating	5.4	5.9	6.3	4.5	4.9	5.4	3.7	4.3	4.7	3.2	3.7	4.2
Model	CL-TS2-3-R35-415-(A/B/C)			CL-TS2-3-R40-415-(A/B/C)			CL-TS2-3-R45-415-(A/B/C)			CL-TS2-3-R50-415-(A/B/C)		
Max Input Current (V in Low)	10			9			8			7		
Max Output Current (A)	7.5	8.2	8.8	6.2	6.8	7.5	5.2	6	6.6	4.5	5.2	5.9
Unit Size W x D x H mm	315 x 420 x 810											
Weight (kg)	85			85			85			85		
Packed Size W x D x H mm	430 x 530 x 1010											
Packed Weight	189			189			189			189		



## Three Phase 415V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS2.5	kVA Rating	24.4	24.4	25.9	16.5	17.3	18	14.4	15.1	15.8	12.6	12.9	13.7	10.8	11.5	12.2	8.6	9.3	10.1
	Model	CL-TS2.5-3-R12.5-415-(A/B/C)			CL-TS2.5-3-R17.5-415-(A/B/C)			CL-TS2.5-3-R20-415-(A/B/C)			CL-TS2.5-3-R22.5-415-(A/B/C)			CL-TS2.5-3-R25-415-(A/B/C)			CL-TS2.5-3-R30-415-(A/B/C)		
	Max Input Current (V in Low)	38			27			24			21			19			15		
	Max Output Current (A)	34	34	36	23	24	25	20	21	22	17.5	18	19	15	16	17	12	13	14
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	86			86			86			86			86			86		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	190			190			190			190			190			190		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3	kVA Rating	60.4	61.8	64	41.7	43.1	44.6	35.9	37.4	38.8	30.9	33.1	34.5	27.3	28.8	30.2	21.6	23	25.2
	Model	CL-TS3-3-R12.5-415-(A/B/C)			CL-TS3-3-R17.5-415-(A/B/C)			CL-TS3-3-R20-415-(A/B/C)			CL-TS3-3-R22.5-415-(A/B/C)			CL-TS3-3-R25-415-(A/B/C)			CL-TS3-3-R30-415-(A/B/C)		
	Max Input Current (V in Low)	94			67			59			52			47			39		
	Max Output Current (A)	84	86	89	58	60	62	50	52	54	43	46	48	38	40	42	30	32	35
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS3.5	kVA Rating	90.6	92.7	95.6	62.5	64.7	67.6	53.2	56.1	58.2	46.7	48.9	51.8	41	43.1	45.3	32.3	34.5	37.4
	Model	CL-TS3.5-3-R12.5-415-(A/B/C)			CL-TS3.5-3-R17.5-415-(A/B/C)			CL-TS3.5-3-R20-415-(A/B/C)			CL-TS3.5-3-R22.5-415-(A/B/C)			CL-TS3.5-3-R25-415-(A/B/C)			CL-TS3.5-3-R30-415-(A/B/C)		
	Max Input Current (V in Low)	141			101			88			79			70			58		
	Max Output Current (A)	126	129	133	87	90	94	74	78	81	65	68	72	57	60	63	45	48	52
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395			395			395		

	R35			R40			R45			R50			
TS2.5	kVA Rating	7.2	7.9	8.6	6	6.5	7.2	5	5.8	6.5	4.3	5	5.8
	Model	CL-TS2.5-3-R35-415-(A/B/C)			CL-TS2.5-3-R40-415-(A/B/C)			CL-TS2-3-R45-415-(A/B/C)			CL-TS2.5-3-R50-415-(A/B/C)		
	Max Input Current (V in Low)	14			12			10			9		
	Max Output Current (A)	10	11	12	8.4	9	10	7	8	9	6	7	8
	Unit Size W x D x H mm	315 x 420 x 810			315 x 420 x 810			315 x 420 x 810			315 x 420 x 810		
	Weight (kg)	86			86			86			86		
	Packed Size W x D x H mm	430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010			430 x 530 x 1010		
	Packed Weight	190			190			190			190		

	R35			R40			R45			R50			
TS3	kVA Rating	18	19.4	20.8	15.1	16.5	18	12.2	14.4	15.8	10.8	12.2	13.7
	Model	CL-TS3-3-R35-415-(A/B/C)			CL-TS3-3-R40-415-(A/B/C)			CL-TS3-3-R45-415-(A/B/C)			CL-TS3-3-R50-415-(A/B/C)		
	Max Input Current (V in Low)	34			30			25			23		
	Max Output Current (A)	25	27	29	21	23	25	17	20	22	15	17	19
	Unit Size W x D x H mm	315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035			315 x 560 x 1035		
	Weight (kg)	185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240			430 x 660 x 1240		
	Packed Weight	395			395			395			395		

	R35			R40			R45			R50			
TS3.5	kVA Rating	26.6	29.5	31.6	22.3	24.4	27.3	18.7	21.6	23.7	15.8	18.7	20.8
	Model	CL-TS3.5-3-R35-415-(A/B/C)			CL-TS3.5-3-R40-415-(A/B/C)			CL-TS3.5-3-R45-415-(A/B/C)			CL-TS3.5-3-R50-415-(A/B/C)		
	Max Input Current (V in Low)	50			44			39			34		
	Max Output Current (A)	37	41	44	31	34	38	26	30	33	22	26	29
	Unit Size W x D x H mm	315 x 560 x 1035											
	Weight (kg)	185			185			185			185		
	Packed Size W x D x H mm	430 x 660 x 1240											
	Packed Weight	395			395			395			395		



## Three Phase 415V TS Voltage Stabilisers

	R12.5			R17.5			R20			R22.5			R25			R30			
TS4	kVA Rating	122.2	123.6	127.2	82.7	86.3	89.1	71.2	74.8	77.6	61.8	65.4	68.3	53.9	57.5	61.1	43.1	46.7	50.3
	Model	CL-TS4-3-R12.5-415-(A/B/C)			CL-TS4-3-R17.5-415-(A/B/C)			CL-TS4-3-R20-415-(A/B/C)			CL-TS4-3-R22.5-415-(A/B/C)			CL-TS4-3-R25-415-(A/B/C)			CL-TS4-3-R30-415-(A/B/C)		
	Max Input Current (V in Low)	190			133			117			104			93			77		
	Max Output Current (A)	170	172	177	115	120	124	99	104	108	86	91	95	75	80	85	60	65	70
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	290			290			290			290			290			290		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	630			630			630			630			630			630		

	R12.5			R17.5			R20			R22.5			R25			R30			
TS5	kVA Rating	150.9	154.5	158.9	103.5	107.8	112.1	89.1	92.7	97	77.6	81.2	85.5	68.3	71.9	76.2	53.9	58.2	62.5
	Model	CL-TS5-3-R12.5-415-(A/B/C)			CL-TS5-3-R17.5-415-(A/B/C)			CL-TS5-3-R20-415-(A/B/C)			CL-TS5-3-R22.5-415-(A/B/C)			CL-TS5-3-R25-415-(A/B/C)			CL-TS5-3-R30-415-(A/B/C)		
	Max Input Current (V in Low)	234			167			147			131			117			96		
	Max Output Current (A)	210	215	221	144	150	156	124	129	135	108	113	119	95	100	106	75	81	87
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647			647			647		

		R35			R40			R45			R50		
TS4	kVA Rating	35.9	38.8	42.4	29.5	32.3	35.9	25.2	28.8	31.6	21.6	24.4	28
	Model	CL-TS4-3-R35-415-(A/B/C)			CL-TS4-3-R40-415-(A/B/C)			CL-TS4-3-R45-415-(A/B/C)			CL-TS4-3-R50-415-(A/B/C)		
	Max Input Current (V in Low)	68			58			52			47		
	Max Output Current (A)	50	54	59	41	45	50	35	40	44	30	34	39
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	290			290			290			290		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	630			630			630			630		

		R35			R40			R45			R50		
TS5	kVA Rating	44.6	48.9	52.5	36.7	41	45.3	31.6	35.9	39.5	26.6	30.9	34.5
	Model	CL-TS5-3-R35-415-(A/B/C)			CL-TS5-3-R40-415-(A/B/C)			CL-TS5-3-R45-415-(A/B/C)			CL-TS5-3-R50-415-(A/B/C)		
	Max Input Current (V in Low)	84			72			66			58		
	Max Output Current (A)	62	68	73	51	57	63	44	50	55	37	43	48
	Unit Size W x D x H mm	400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500			400 x 700 x 1500		
	Weight (kg)	307			307			307			307		
	Packed Size W x D x H mm	510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700			510 x 810 x 1700		
	Packed Weight	647			647			647			647		

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